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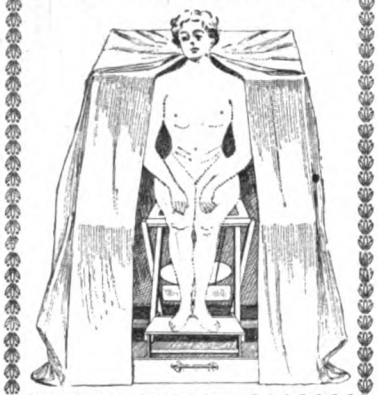

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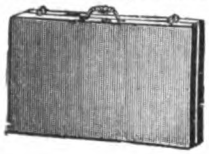

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THE MEDICAL DIAL

A Monthly Record of Medicine and Surgery.

Vol. I. MINNEAPOLIS, DECEMBER, 1898. No. 1.

Original Articles.

CHRONIC VALVULAR LESIONS.

Clinical Lecture, Delivered at the Minneapolis City Hospital,

BY JOHN W. BELL, M. D.,

Professor of Physical Diagnosis and Clinical Medicine in the University of Minnesota.

Gentlemen: The cases I shall bring before you this morning will serve to emphasize certain important points connected with the diagnosis and management of chronic valvular lesions.

The first case is one of fully compensated valvular disease, having as its principal point of clinical interest a systolic musical murmur of unusual intensity and duration the origin of which has given rise to much discussion and great diversity of opinion among clinicians.

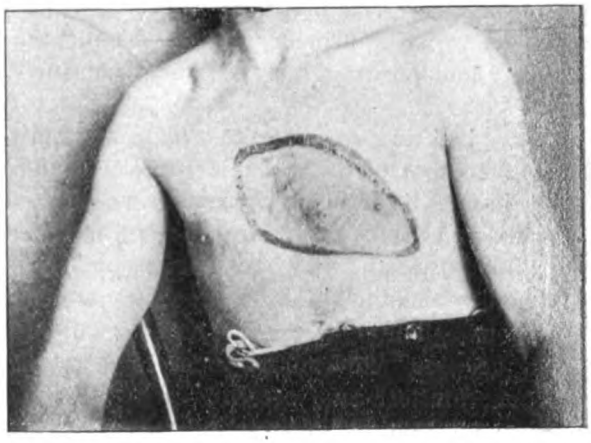
Case 1. J. M., male, Russian, Aet. 33. Family history negative. Denies gonorrheal and syphiletic infection, claims never to have had rheumatism. Had typhus fever in 1893. During convalescence noticed slight dyspnœa, which continued thereafter, especially on exertion. Following prolonged exposure during the winter of 1894, in the city of New York, he became quite ill, was admitted to St. Luke's hospital, where he was informed that he had organic valvular disease. He remained in the hospital three months; discharged improved, but still suffered from dyspnœe and praæcordial distress, especially on exertion; later gradual improvement.

Status præsens.

Inspection—You will observe that he is well nourished; facial expression and color of skin those of apparent health except a slight cyanotic tinge of lips and nails. You observe there exists a small scar over apex, the result of a sabre thrust. Note the forcible diffused impulse in fifth interspace two centimeters to left of left mammillary line, also slight epigastric impulse and marked pulsations of corotids and temporals.

Palpation—On palpation I find a forcible but diffused apex beat; pulse full, regular, but collapsing in character.

Percussion—On outlining the relative deep cardiac dullness, the all important one, you observe it extends at level of third rib four centimeters to the right of sternum and seven to the left. At the level of upper border of fifth rib it extends transversely from a point four centimeters to the right of sternum to ten centimeters



Topographical Outline of Deep Cardiac Dulness, Case 1.

to the left. Vertical dullness from the center of the second space to the center of sixth rib. The somewhat square outline suggests general enlargement of all the chambers; hepatic dullness slightly increased downward.

Auscultation—In the elucidation of this case auscultation becomes the highest court of appeal. In the clinical investigation of cardiac murmurs, the following essential points should be observed: 1st, The rhythm; 2nd, Point of differential maximum intensity; 3rd, Area of Transmission; 4th, Its sound characteristics.

Placing my stethoscope over the apex, I discover a loud systolic musical murmur, having its maximum point of intensity at the level of the fifth interspace in left sternal line—audible with diminishing intensity to the left as far as the scapular line—to the right as far as the right mammillary line, above

as far as the second rib. On listening, one is impressed with the musical character and marked intensity of the murmur. Its musical character has caused its possessor to be designated as "the man with the musical heart."

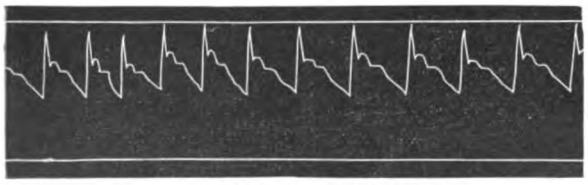
We have before us the problem of locating the origin of this systolic murmur. You will observe that it corresponds to the characteristics of the murmur of mitral insufficiency, except that its point of maximum intensity is over the usual site of tricuspid insufficiency. In spite of the above fact we are fully justified in excluding tricuspid insufficiency for the following reasons:

1st. The intensity and pitch of the murmur as well as its large area of transmission, speak against its tricuspid origin.

2nd. Absence of direct jugular pulse.

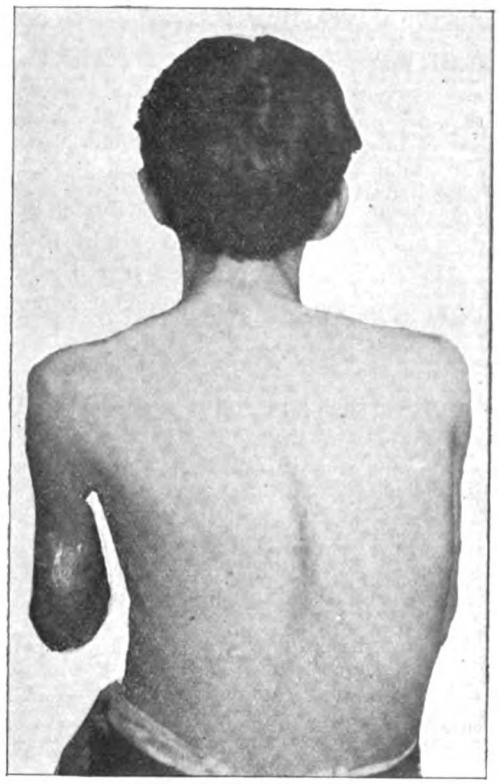
3rd. Absence of hepatic engorgement or pulsation. Musical murmurs are not uncommon, yet we seldom meet with one having the intensity and purity of the one under consideration.

If we had time we might speculate at length as to the cause of this peculiar musical sound. A slit in one of the mitral curtains, a vegetation attached to a leaflet swinging back and forth in the blood stream may be responsible. We can only definitely say that the audible vibrations giving rise to such a sound must be free and unhampered to give us the pure musical tone present. Why has this musical murmur its greatest intensity over the tricuspid area? The explanation is to be found, I believe, in the relation the ventricles sustain to the anterior chest wall, the marked enlargement of the right ventricle having caused the left ventricle to recede from the chest wall, hence sounds originating at the mitral must of necessity find their way to the anterior chest wall by way of the interventricular septum and right ventricle.



Tracing of Right Radial of Case 1.

Placing my stethoscope over the aortic area, I discover a short, soft churning diastolic murmur of feeble intensity, having its point of maximum intensity over the aortic area, feebly transmitted downward in the direction of the apex, evidently due to aortic insufficiency. In addition to the diastolic murmur we have a short, somewhat harsh systolic murmur, transmitted along the course of the aorta, heard distinctly at suprasternal notch and over both carotids. You will recall the fact that the apex systolic musical murmur was not audible above the second rib and not conveyed by the vessels at the base. This murmur corresponds to the characteristics of the murmur of



Posterior View of Case 2.

aortic stenosis, due, probably, to slight stenosis or slight dilatation of the root of the aorta, a frequent cause of faint systolic murmur over this area. An analysis of the accompanying pulse-tracing of the right radial tends to confirm the diagnosis, at least, of aortic insufficiency. The discussion of the prognosis and treatment of this case we will defer until we have examined the next case.

Case 2. W. W. Aet. 20, single, student. Family history, negative. Personal history, measles at the age of three years, diphtheria at eleven, never has had rheumatism. General health good until the age of eleven, then noticed slight shortness of breath and tendency to frequent attacks of bronchitis. In 1893 noticed prominence of præcordial region, which grad-

ually increased until marked bulging of the lower left half of the thorax, accompanied by noticeable curvature of spine occurred. This patient came under my care in June, 1894, suffering from dyspnœa, orthnopnœa, præcordia distress, palpitation, general venous engorgement, with slight edema of the lower extremities, the usual signs of advanced cardiac insufficiency.

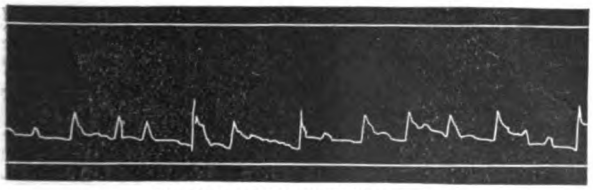
Status præsens.

Inspection—Well nourished, skin normal in color except a faint cyanotic tinge of finger tips and nails. Directing our attention to the thorax we find a marked deformity, consisting of a sharp lateral curvature of the dorsal portion of the spine with an abrupt jutting forward and to the left of the ribs and cartilages below the third, causing pronounced prominence of the left mammary, inframammary and axillary regions.

From a careful study of this case extending over a period of several years I have no hesitancy in saying to you that I believe the deformity present entirely due to the great enlargement of this young man's heart, occurring as it has during the period of rapid growth. The deformity is fairly well shown in the accompanying photographs.

On directing our attention to the visible apex beat we find it displaced downward and outward, the diffused and forcible impulse extending from the fourth rib downward, being most pronounced in the midaxillary line in the seventh interspace. You observe the marked pulsation in the arteries of the neck, also the pronounced excursions of the superficial arteries, brachials, radials, etc.

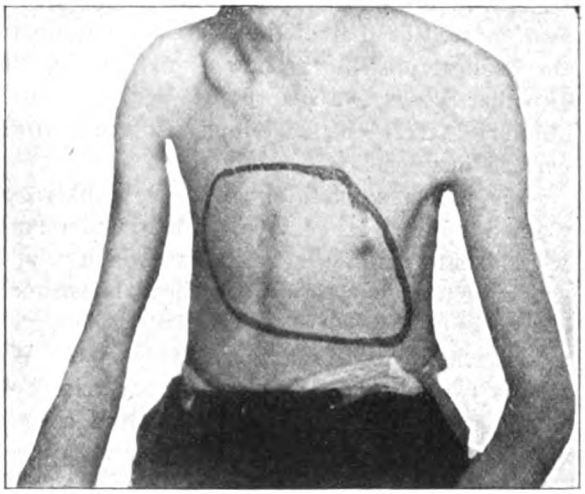
Palpation—The apex is felt most distinctly in the mid axillary line at the lower part of the seventh interspace, being forcible but slightly irregular in rhythm. The pulse is irregular and intermittent, as you will observe by this puse tracing of the right radial.



Tracing of Right Radial of Case 2.

Percussion—The outline of relative or deep dullness, you observe, is almost square, extending from the center of the second space to the upper border of the eighth rib in the mid axillary line. At the level of the sixth rib we find the transverse dullness extending from a point two inches to the right of the sternum to within a short distance of the left mid axillary line, indicating the existence of extreme enlargement of the heart (cor bovinum). The topographical outline of deep dullness is well shown in the accompanying photograph.

Auscultation—I find on listening over the aortic area a well marked diastolic murmur, displacing the second sound and continuing well toward the end of diastole, transmitted toward the apex. Placing the instrument over the apex, I detect a soft, blowing, systolic murmur transmitted to the left, corresponding to the characteristics of the murmur of mitral insufficiency,



Topographical Outline of Deep Cardiac Dulness, Case 2.

probably due to relative insufficiency of the mitral curtains, owing to the extreme enlargement of left ventricle.

Diagnosis—Aortic and mitral insufficiency with unusual enlargement of all the chambers of the heart, causing deformity of chest, dating back to his attack of diphtheria.

I find I have consumed so much time in the examination of these two cases that it will be impossible to do more than direct your attention

1st. Every healthy individual starts on life's journey with a considerable balance to the credit of his heart, the extent varying in different individuals. This balance we designate as reserve compensatory force, the value of which is well shown in the perfect compensatory hypertrophy present, especially in case one, and in a lesser degree in case two.

2nd. That the accurate diagnosis and rational treatment of valvular lesions is only possible when based on a correct anatomic and physiolo-

gic, as well as mechanical understanding of the heart and vessels, hence it is essential that we keep constantly in mind the fact that the heart is not merely a mechanical pump, but that it is also a vital muscular pump, presenting problems partly mechanical and partly vital.

3rd. In the management of chronic valvular lesions we should keep constantly in mind the fact that they are permanent and hence incurable, and as such are losses of principal which can never be fully repaid. However, if we can make our patients realize this important fact and have them govern themselves accordingly they may live as long as if their hearts were normal.

4th. Hence all medication should be directed toward bringing the patient's general nutrition, as well as that of the heart muscle, up to the highest possible point and maintaining it. In other words, we ignore the incurable valve lesion and treat the individual suffering from cardiac insufficiency.

The patient's condition should be frankly explained to him. He must be made to understand why he must follow instructions explicitly, and that if he transgresses, his sin will manifest itself in attacks of præcordial distress, palpitation, gastro-intestinal catarrh and renal congestion. We should carefully regulate his diet, exercise and habits. He should be advised to lead a temperate, quiet, orderly life, as free from worry and excitement as compatible with our present modern civilization.

Case one, representing compensated valvular disease, may be dismissed with the above advice.

Case two received the following treatment on coming under my care in the early part of 1894, suffering from advanced cardiac insufficiency. He was placed in bed and kept absolutely quiet. Digitalin, nitroglycerin and strych. were given in generous doses subcutaneously. The bowels were opened freely daily with salines; general massage daily. After a fortnight of rest under above treatment on a light but nutritious diet, the condition of the heart and circulation having improved markedly, he was given a course of saline baths, still continuing the subcutaneous use of strych. and digitalin. At the end of four weeks movements of resistance were added in addition to general massage. At the end of six weeks he was permitted to move slowly around the room for short periods three times daily, spending the remainder of his time recumbent; later graduated exercise in the open air in the form of short walks, continuing the use of digitalis and strych. per orem.

This young man owes his life to the faithfulness with which he carried out minutely and intelligently every detail of treatment. During the past three years his general health has been excellent. Compensation is not so perfect in this case as in case one, perhaps never will be, yet in spite of the broken rythm, as indicated by the pulse and pulse tracing, the functions of the heart are performed quite normally, an occasional slight gastric catarrh being the only evidence of unbalanced circulation.

In closing I desire to again emphasize, as I have so often in the past, the efficiency of the sub-cutaneous method of treating cardiac insufficiency.

ETHERION, THE NEW ATMOSPHERIC GAS.

That subtle fluid which pervades all solid and liquid bodies and occupies the boundless space between the stars will probably soon be understood. Previously to the year 1879, three states of matter were recognized, solid, liquid and gaseous. Michael Faraday expressed his belief that there existed a state of matter in which the molecules were relatively as far apart as compared with those of a gas as the molecules of a gas were compared with those of a liquid. What Faraday suggested was demonstrated by Crookes in 1879 when with the aid of the tubes which bear his name, he proved the existence of a radiant or fourth state of matter. To produce this fourth state the air of the tube must be exhausted to one millionth of an atmosphere, the condition necessary for the production of the X rays.

New light will perhaps be thrown upon this interesting subject in the discovery by Prof. Chas. E. Brush of a new element in the atmosphere to which he gives the name "Etherion." In a preliminary paper before the American Association Prof. Brush states that he discovered this new atmospheric gas while examining glass for occluded hydrogen. Its chief characteristic is enormous heat conductivity at low pressure. This heat conductivity is one hundred times that of hydrogen and the mean molecular velocity of the gas is estimated at more than a hundred miles a second. Its density is only a thousandth part that of hydrogen, while its specific heat is six thousand times greater than that of hydrogen. While the heavier gases of the atmosphere lie near the earth's surface this newly discovered gas extends far beyond and probably is identical with the ether "in which the stars swim."

MODERN IDEAS OF INFLAMMATION.

BY KNUT HOEGH, M D.,
Professor of the Principles of Surgery and of Clinical Surgery in Hamline University.

In the higher animals, and in its full development, inflammation is characterized by the four cardinal symptoms of redness, swelling heat and pain. Lately we have added impaired function. It seems that we might have been more logical in saying simply changed function.

However correct this description may be it does not give us any insight into what inflammation really is, and none of the explanations given for the appearance of those symptoms suffices to indicate the essence of inflammation, and tells what really takes place in the organism during this complicated process. Many have been the efforts made to explain the mechanism of the process, and as each of the modern ones has made our view more comprehensive, it will be necessary briefly to indicate a few of the most important.

Virchow held that the essence of inflammation was the action of the tissue cells; acted upon by some, not yet understood irritation, they began to proliferate or multiply by division, thereby producing new material.

Cohnheim went a step further and observed under the microscope what took place in the inflamed mesentery of a frog; he was struck by the changes in the circulation; he observed the dilatation of the blood vessels, the initial accęleration of the blood, followed by its slowing up, the mural implantation of the leucocytes in the veins and capillaries, the transmigration (or diapedesis) of the leucocytes. He looked upon the vascular system as the prime factor, and thought that a molecular change in the vessel walls was the chief cause of inflammation. The adhesion of the white corpuscles (leucocytes) to the venous and capillary walls was explained by a greater adhesion, a sort of sticky condition; the slowing up of the current made the lighter leucocytes congregate at the walls, while the specifically heavier red corpuscles continued to swim in the middle: through a molecular change in the formerly impervious walls, they became able to let not only a greater amount of plasma transude, but also to allow the formed elements to go through by a peculiar process, and without making a hole in the vessel wall.

Recklinghausen and Thoma also considered the change in the circulating apparatus as the main element in the production of inflammation, but went a step farther in the causation by ascribing it to the vasometer nerve centres in the inflamed territory.

All of these theories had an element of truth in them, but erred in being too exclusive. Virchow's theory in looking too exclusively at the tissue cells; v. Recklinghausen and Thoma, as well as Cohnheim in considering the vascular system alone as the chief seat of the inflammatory process; for organisms that have no vascular system also react against noxious influences.

To understand the reaction of animal organisms against them, Metschnikoff began to study the lower organisms as subjects of irritation. He did not have to descend in the scale of animals lower than the frog to see that one of the cardinal elements of inflammation was lacking; in the frog there is no increase of heat. But he went lower down, to the very lowest organisms that we recognize as animal, and began with the study of the ameba.

The ameba is the most simply built of all animals; it consists in fact of one single cell, a mere mass of living protoplasm, with a nucleus, and without even an enveloping membrane. If an ameba is cut in two, the part that retains the nucleus regenerates itself and the lost part grows out. If the ameba meets a bacterium, it throws out jelly-like prolongations, that embrace the enemy and that gradually coalesce with the mass of the animal, whereby the bacterium soon finds itself enclosed within the ameba; a contest begins, in which the bacterium by its toxines, secreted by its metabolism, impairs the vital functions of the host; if this is strong enough to resist action of the toxines, the ameba disintegrates the bacterium, in the cell substance of which we see small granular masses, that finally fall apart, and the bacterium is destroyed; its remnants are then gradually expelled, and the ameba goes on living. If, on the other hand, the bacterium prevails, the ameba dies under the formation vacuoles, and the bacterium growing on its substance, lives on and multiplies.

Reaction against noxious influences in the ameba consists then, first in regeneration, second, digestion, third expulsion.

We shall see that this type is followed by all animals, but that the process becomes more complicated as we ascend higher in the scale of organisms.

The gastrula is much more highly organized. It consists of an aggregation of cells that have become differentiated into layers, an ektoderm, an entoderm and a mesoderm. The whole animal forms a sac with an open mouth. If a foreign body comes in contact with a gastrula inside of the sac, in other words, if it is swallowed by the gastrula, the fixed entoderm cells incorporate it, and transport it into the body substance; then we see the mesoderm cells that are more movable, and in a way floating, collect around it; they incorporate and digest the foreign body, and this is again taken in hand by the cells of the ektoderm, by means of which the useless particles are expelled. This is the same process as in the ameba, but the cells being differentiated into layers with different physiological properties, the work is divided between them to accomplish the same result.

In some of these lower animals we see a new feature. Some of the cells of the mesoderm coalesce and form a great cell or plasmodium that possesses greater digestive properties than the original cells.

It may be said that these processes in animals without a vascular system are very different from the reaction that takes place in the higher animals, and you may deny them the dignity of the name of inflammation. We shall, however, see that there is a gradual transition, and it is by studying the process in the simplest forms that we get an insight into the highest.

Even in some animals with a vascular system the process of inflammation takes place without any participation of the blood vessels. In the class "vermes" or worms, a foreign body is digested and expelled without any change in the blood vessels; it is the phagocytes of the perivascular fluid and the endothelia of the peritoneal cavity that surround and digest the foreign body.

So far, we have seen the reaction of an animal organism, the process that forms the prototype of inflammation, go on without any action of the vascular system whatever.

It is only when we ascend another step in the ranks of animals, when we come to the arthropods and the mollusks, that we see the defensive process acting mainly in the vascular system. Blood vessels do not in these animals yet form a continuous system of communicating tubes, as in the vertebrates, but they empty into the general body cavity. Their blood consists of a number of white corpuscles with one nucleus leucocytes, and these leucocytes develop strong phagocytic (or digestive) properties. In these animals is also found a curious gland, the use of which in health has so far been undetermined; Kowalewski has, however, found that it is possessed of strong phagocytic properties; it thus shows itself to be a rudimentary spleen. When microbes enter a molusk or an arthropode, the white corpuscles of the blood, and further the rudimentary spleen develop their phagocytic action, and destroy the microbes, or if they are worsted in the encounter, the animal dies. So we see that in this class of animals, the blood-cells play a very important part in the reaction of the organism; but the bloodvessels show no change. In all these lower animals we find that the defensive process consists in the incorporation of the approaching microbes, their digestion by certain cells, that Metschnikoff calls phagocytes (eating cells) and the final expulsion of the invader. The vascular system is not yet developed in this evolutionary state, and when we meet its first rudiments it takes no part in the process.

It is only when we come to the vertebrates that we find the vascular system taking a conspicuous part in the defense, and when we remember that this system is developed from the mesoderm, and further that it is the mesoderm cells that furnish the phagocytes in those animals where a differentiation of the original cells into the three fundamental layers takes place, our view is enlarged to take in that essential unity of life action, that we can follow in observing the evolution of organic life.

Already in the amphibia, the lowest of the vertebrates, we find that the circulatory apparatus plays a conspicuous part in the reaction. While in the ameba the whole animal reacted, while in the gastrula the floating cells of the mesoderm developed phagocytic properties, while in molusks the circulating mesoderm cells of the vessels took up the battle against the microbes, we find that in the higher organized vertebrates the reaction mainly takes place in the vascular system, a highly developed evolution of the mesoderm. But we shall see that this reaction is not limited to the vascular system, and that a theory of inflammation that does not look further is essentially defective. The connective tissue cells perform a very important function, so do the lymph glands, the liver and the spleen,

all organs that are wholly or partly derived from the mesoderm.

The most conspicuous change in an inflamed territory of the higher vertebrates, is the change in the vascular system, so beautifully demonstrated by Cohnheim in the mesentery of the curarized frog. Most striking is the dilation of the vessels, and the increased velocity of the current followed by retardation, that soon allows each blood corpuscle to be seen, especially in the veins and capillaries, where the well known phenomenon of the separation of the three formed elements takes place. The bloodplates and the leucocytes sticking to the walls—mural implantation, and the red corpuscles floating in the middle of the current. Then comes the diapedesis, or the transmigration of the corpuscles through the intact wall, increased flow of plasm through the wall, whereby the neighborhood becomes soaked with this exudate, as the intercellular spaces, the radicles of the lymphatics, are not equal to the task of carrying the exudate away quickly enough. All these well known processes do not by far represent the reaction of the organism, for just as important changes take place outside the vessels.

In the first place we observe that there is a destructive process going on in the immediate neighborhood of an inflammatory focus, its degree and extent in proportion to the inherent virulence of the invading bacteria, and the impaired vitality of the surrounding tissue cell. This reaction consists in death (necrosis) of the connective tissue cells. In their fibres we see first small highly refractive globules or spheres; the protoplasm of the cells show vacuoles, that is, hollow spaces indicating dissolution; soon the cells swell and become translucent; the cell nuclei that are enveloped in a double membran consists of two different constituents, first-chromatin, arranged in threads that look like a collection of loops or a net; second, the acromatin, a substance that fills the meshes of this net. The chromatin substance becomes granular, and soon disappears, indicating destruction of nucleus and consecutive death of the cell. The process of death is often that of so-called coagulation necrosis, a process whereby the protoplasm of the cells, containing albumen, becomes coagulated (like boiled) and soaked in the tissue juices or exuded plasma.

This death of neighboring connective tissue cells is primary, the result of the poisoning by the toxic secretion of the bacteria; it is usually minimal in extent and followed by peptonizing of the dead cells, that is a process by which the albumen is changed to pepton, a lifeless but soluble form, that may be resorbed and carried away by the lymphatics.

At a certain distance from the bacteria, that is, from the inflammatory focus, where the effect of their toxines is insufficient to produce death of the cells, we find the connective tissue cells react in a conspicuous manner. These cells multiply, proliferate, partly as Virchow showed by direct fission or segmentation; the nucleus dividing in two, and the cell protoplasm becoming constricted in the middle and finally separating into two, each with its own nucleus; partly by the process that is known as karyokinesis or mitosis; as this seems to be the more common and important process, it must be briefly described. There are first formed two distinct poles in the protoplasm of the cell by the aggregation in the cell substance of two heaps of granules in diametrically opposite parts of its body. Soon changes take place also in the nucleus; the chromatin threads become thicker and more convoluted, the inner layer of the nuclear membrance is incorporated in the chromatin network, while the outer layer seems to continue with the achromatin of the necleus. The achromatin forms fine threads that connect the two poles forming an elongated mass, considerably wider in the centre, and thus having a fusiform or spindle shape; in the next stage the chromatin threads from a star-shaped mass with elongated loops, running out from a common achromatic centre somewhat like the spokes from the hub of a wheel. This chromatin mass occupies the equatorial region equidistant from the poles and is soon seen to cleave into two masses, which arrange themselves in such a manner, that the angles of the loops point towards the respective poles, while the limbs point toward the equator, obliquely or perpendicularly. There is thus differentiated an equatorial disc, from which the threads are separated; these gradually contracting towards the poles arrange themselves finally as a wreath around each pole and the formation of two cells out of the original one is completed by the formation of a nuclear membrane around each wreath, and the separation of the two halves at the equator; this takes place gradually, beginning as a constriction which becomes so far advanced that soon only a few achromatin

threads connect the two daughter cells which finally are separated by the complete disappearance of these threads.

At the same time as we observe the necrosis of the cells immediately exposed to the toxines of the inflammatory focus, and proliferation of the cells as described in the more remote neighborhood, we see an immigration of leucocytes into the infected area. These cells are partly derived from the blood vessels by emigration, partly from the fixed connective tissue cells, that under ordinary circumstances remain in the stroma, but stimulated by the irritation of the inflammation, return to their embryological phase and assume ameba-like properties, (Ranviers Clasmatocytes also called plasma cells by Waldeier.) Many of these immigated cells die from the bacterial toxines, and their nuclei undergo what is called fragmentation; that is, a process whereby the nuclear chromatin substance is broken up into fragments that remain inside the cell body; such broken up chromatin substance is incapable of karyokinesis, and therefore unfit to contribute to the building up of new tissues. It is mainly leucocytes that undergo this fragmentation; their destination may perhaps be to serve as nutriment for the other cells that proliferate and participate in the process of regeneration. It is known that the blood contains several kinds of leucocytes endowed with special qualities, and we do not believe that they all perform the same functions in the process of inflammation. We recognize at least four different kinds of leucocytes that distinguish themselves partly by their size and the number of their nuclei, but more conspicuously by their power of absorbing anilin colors; their nuclei take the nuclein stains, but their protoplasm reacts differently according to the basic or acid condition of the stain.

1. The greatest number of leucocytes (75 per cent.) have one lobated or several nuclei (they are polynucear) of many different forms, their protoplasm is granular and is only colored by nearly neutral or faintly acid mixtures of basic and acid colors. They do not take purely acid stains nor basic ones.

Another variety is called eosinophil leucocytes; their protoplasm is colored by acid stains (eosin) and their nuclei are also rather large; usually one or two nuclei. Their nuclei have different forms, the protoplasm is coarsely granular, and seems loosely connected with the nucleus.

A third kind is the socalled lymphocytes, presumably derived from the lymph glands; they are smaller, have only one nucleus, and take only basic stains; they are further characterized by having a very small protoplasmic body surrounding the nucleus.

The fourth species are also mononuclear (with one nucleus) and take both acid and basic colors; they are relatively of large size. All these cells have ameboid movements, but the lymphocytes less than the others; the eosinophiles rather more; these are not phagocytes, while the neutrophile multinuclear cells, and mononuclear cells are in high degree endowed with phagocytic properties.

In the further process of inflammation, say from the second to the third day, there is an increasing immigration of leucocytes; many of the cells, especially the large mononuclear cells show marked phagocytosis; they penetrate to the focus of inflammation and are seen to incorporate the bacteria, which soon show signs of degeneration. Other leucocytes do not reach the inflammatory focus, but form a wall around it, whereby it becomes in a certain way incapsulated; in this wall are probably also the cells that are derived from the fixed tissue cells, and that have strong phagocytic properties; the phagocytosis in the inflammatory focus goes on increasing, the large mononuclear cells and the polynuclear neutrophile cells playing the most important part. But not all leucocytes prevail; some of them succumb, undergo fragmentation of their nuclei, and become pus corpustles. Thus an abscess cavity is formed, surrounded by a granulation wall rich in new formed blood vessles; the abscess cavity gradually enlarges; the surrounding membrane becomes thinner, as part of it degenerates into pus, and finally it reaches a surface, where it breaks open. In the remaining part of the wall appear giant cells by coalescense of several cells—plasmodium—a form of cell life that is characterized by strong phagocytosis. These giant cells contribute largely to the destruction of the dead material in so far as it is not eliminated by expulsion through the abscess opening. After this comes organization of the scar and final healing.

How are we to look upon this process? Are we to consider inflammation as a mischievous action of the organism that we ought to oppose? Or ought we to look upon it as a salutary reaction that indicates the defensive lines upon which the organism meets and fights injurious

intruders and thus gives us a hint how we shall shape our actions so that we support nature's efforts?

There are certain irritants that owing to their inherent qualities produce less local reaction than others, that in other words are accompanied by less local inflammation. As an instance the streptococcus may be named. In many cases this bacterium produces in healthy tissue very little swelling, and very little pain, in short but a very slight inflammation. But at the same time it kills the cellular elements and produces rather extensive necrosis; untrammeled by reaction from the side of the blood vessels, it finds but little opposition by emigrated leucocytes; only a slight degree of phagocytosis takes place, and but few of the connective tissue cells return to their embryological condition to exhibit their amebalike properties. Under such circumstances the streptococcus colony rapidly increases in number, the cocci spread into the intercellular spaces, get into the lymphatics and the lymph glands, producing their toxins; they soon poison the blood and a serious general condition becomes manifest. The local inflammatory processes are comparatively unimportant; but the very existence of the individual is threatened by the toxemic condition of the blood . Another instance is gathered from experimental pathology. The bacillus pyocyaneus is pathogenic for rabbits. Injected it produces but slight local reaction, but becomes dangerous from general blood poisoning. If on the other hand the animal has been made comparatively immune, the injection produces a strong inflammatory action in the injected territory, but the animal is not killed by toxemia.

We must therefore consider local inflammation as nature's protective reaction against infection.

If we look upon the process as it takes place through the whole series of animal organisms, we find that phagocytosis, the incorporation and digestion by living cells, is the fundamental process that developes in every animal from the one celled ameba to the highest vertebrate. In the second place we notice incapsulation and finally expulsion, processes, that in the higher animals are mainly carried on by the aid of the blood vessels, where we also find the most conspicuous changes, such as above mentioned.

How does this process originate? Must we assume that there is an outside influence that immediately directs it, that there is a vital force which consciously steers the cell to the infected focus and calls the slumbering cells to new life; to appear on the arena as champions of the threatened organism? Shall we endow the leucocytes and the plasma cells and the endothelia with will and purpose? The first assumption is entirely contrary to our well founded and universally accepted natural philosophy; the "vis medicatrix naturae" and similar teleological conceptions are long ago exiled to the lumber room of exploded hypotheses; the second theory is so phantastic that we hardly need to consider it.

We can explain the process without invoking the aid of any of these unreasonable theories; we can arrange them under the general chemical and physiological laws; we can in this process recognize certain inherent qualities in living matter that shows us, that it is an expression of animal bio-chemical laws, that no more need the appeal to a separate, extraneous force, disassociated from matter, than the chemist has to believe in a force outside of matter when he sees two elements combine.

The question is answered by considering the properties of living tissue, particularly that form of it that has ameba like characteristics. They have, like elements in chemistry, affinities that draw them towards, or on the other hand repulsive qualities that push them away from certain other forms of matter.

The toxines produced by bacteria, as well as the proteins existing in their bodies have attractive qualities for the leucocytes, and vice versa; so that the leucocytes in their chemical organization have forces that compel them to unite with the bacterial toxines or proteines, just as atoms of oxygen and hydrogen are compelled to unite to form molecules of water. This process of attraction and union is called chemotaxis, and is just as comprehensible, or rather just as incomprehensible as the chemical affinities, that we have mentioned. Although this explanation of the emigration of leucocytes only suffices for one phase of the process, and although much in it remains unexplained, we see that part of the process at least finds its counterpart in other actions of matter, with which we are familiar, and although the understanding of the ultimate cause is, and probably always will be, incomprehensible to us, we recognize it as analagous to other processes in the material world.

(To be continued.)

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SALUTATORY.

The City of Minneapolis, with a population of two hundred and fifteen thousand people, and three hundred and fifty practising physicians, the seat of two prosperous medical colleges, six general hospitals and five dispensaries, and the medical center of a vast territory has no journal to voice the interests of the regular medical profession. To supply this open field The Medical Dial makes its appearance. It will be the constant aim of its promoters to make it all that a first class medical journal should be. Nor should this be a difficult task, for in the hospitals of this state is a vast amount of clinical material, both medical and surgical, from which valuable practical knowledge can be drawn. Throughout the Northwest are bright, progressive, and ambitious men whose writings from time to time will adorn its pages. An efficient corps of collaborators has been secured who will keep its readers abreast with the world's literature in the various departments of Medicine and Surgery. These gentlemen are widely and favorably known.

To the profession at large, and especially to our fellow workers in the Northwest, we shall devote ourselves with the determination that this journal shall be free from partisanship, and conducted in the interest of no clique or faction. To do justice to every one, to uphold the honor and best interests of the hard-working practitioner, to record faithfully the progress of medicine and surgery in the tersest and most practical manner will be our endeavor; and in all these efforts we shall strive to be:

"True as the needle to the pole
Or the dial to the Sun."

THE SUB-CONSCIOUS MIND. SUB-LIMINAL CONSCIOUSNESS.

It was said that the late Rufus Choate, during his arguments before the courts and juries, would illustrate and enforce his brilliant efforts with apt quotations of prose and poetry, while he was really collecting his thoughts on the next point to be presented. It was also related by one of the most expert stenographers in our courts, that he could take the speeches of two lawyers talking at the same time; but when the judge joined in the debate it was liable to confuse him. By such facts and experiences it would seem that some minds, at least, are capable of carrying on two or more processes of thought at the same time, and that this faculty is susceptible of cultivation and improvement by exercise; it is probably true that one current is predominant and will attach itself to the memory, while the others will not make any permanent impression on the sensorium, being carried on, apparently, by their own momentum when once started; and, as Dr. T. D. Crothers, of Hartford, Conn., says, "The mind acts independent of reasoning and sense impressions, one phase of which is where the person is controlled by a dominant idea, so that all recognition of surroundings and time are lost, although he apparently acts in harmony with them." These mental conditions, it seems, may properly be classed as sub-conscious, or sub-liminal as one may prefer, meaning that they are under, over, or about the margin of the real current of mental action.

These terms, "sub-conscious mind," and "sub-liminal consciousness," have been used quite frequently, and have not been well defined by any authority, or recognized by lexicographers. In order to bring the subject before the

"International Medico-Legal Congress" for discussion, Clark Bell, secretary of the Medico-Legal Society of New York, addressed a letter of inquiry to several eminent Psychologists for their opinions as to these terms; he simply asked for a brief statement which might be classed as a definition and a contrast between the two expressions. To this letter he received a large number of replies.

Prof. W. X. Sudduth, of Chicago, writes, "Sub-conscious relates to that part of our nature, that operates beneath, or beyond the threshold of consciousness, and only comes above the threshold at special and peculiar times. The term "subliminal self," as far as I know, originated with and has been mostly used in the reports of the Society of Psychical Research, and has reached little further. Certain it is that it has not come into common use in general psychological literature. Mind is the intelligence within man, natural and acquired, that makes him what he is intellectually, morally and physically. The "natural" mind is an inheritance and operates beneath the threshold of consciousness as consciousness only comes through knowledge based upon comparison of sense relationships. Subconscious mental activity is in operation at all times, however, and from the very inception of being, while objective or "acquired" mental activity only comes with age and understanding. The term age, as here used, relates to maturing processes, not to maturity. The objective mind or acquired intelligence is the result of the sum total of sense experience has its seat in the sensorium where different centers for the several senses have been definitely located. The subjective or natural intelligence has no special seat but permeates all portions of the body, and controls the so-called unconscious functional activities, while the objective mind directs the conscious or acquired functions. Subliminal consciousness is a state of the natural or subjective mind and as such is to be clearly differentiated from objective and super-conscious mind."

Prof. William James, of Cambridge, Mass., writes that "Both terms, "sub-conscious mind" and "subliminal consciousness" seem to me to be vague and denotive, rather than positively defining. They designate the source of acts, whatever it was, which seem positive and intelligent, (as involving perception or caprition) and which nevertheless do not spring from the usual clear consciousness with memory attached. I think the term sub is unlucky, since some of the phenomena seem super in respect of the cognitive powers displayed in them. I have been in the habit of talking of "extra marginal consciousness" as this seems to escape the narrowing implications of "sub."

Dr. James R. Cocke, a writer of note, sums up his explanation as follows, viz.: "This 'subliminal consciousness' of which we hear so much is probably the product of the lower centers of the nervous system, which during active conscious life we are ordinarily not aware of, owing to cerebral inhibition, for the time, in abeyance, the lower centers of the nervous system trained ordinarily to a form of automatism, taking up and carrying on the ordinary functions of the mind."

Prof. Harlow Gale, of the University of Minnesota, says, "Although 'subliminal consciousness' is strictly a contradiction, an increasing number of phenomena above and below the threshold of consciousness make some term for their classification necessary, and for their purpose 'subliminal consciousness' implies much less in the way of personification into a metaphysical unity than 'sub-conscious mind.'"

Prof. J. McK. Cattell, of Columbia University, New York, says, "I do not myself make use of the term sub-conscious mind. 'Subliminal consciousness' I should define as consciousness which is so indistinct that it is known only through its influence on the course of mental life. The term was, I believe, invented by Mr. F. W. H. Myers. It does not seem to me to be any better than the older and synonymous term sub-consciousness."

Prof. J. T. Eskridge, of Denver, Colorado, writes, "Sub-conscious mind or sub-consciousness is generally employed to define that state in which the mind is, or may be by suggestion, the active possessor of all passed acquired knowledge. Such a state is found in some cases of somnambulism and in the state of hypnosis of some persons. Consciousness, as we ordinarily understand it, is a condition of mind in which we have a summary of passed experiences, and are able to correllate this, with the impressions made upon our sensorium at the time to which our mind is actively directed. Sub-consciousness means less than consciousness, but it seems to me that 'subjective consciousness' as used by Hudson in his work entitled 'The Law of Psychic Phenomena,' better expresses the mental

state commonly designated 'sub-conscious mind,' or 'sub-consciousness.' 'Subliminal consciousness' has seemed to me a pompous or stilted definition for 'subjective consciousness.'"

Thomas J. Hudson, author, etc., writes: "The sub-conscious mind is the source of that intelligence which is manifested, when the functions of the cortex are wholly or partially inhibited, as when one is in a state of somnambulism, either spontaneous or artificially induced, as in hypnotism. 'Subliminal consciousness' is a term coined by F. W. H. Myers to express precisely the same mental phenomena, and I give his definition in his own words: 'Subliminal: Of thoughts, feelings, etc., lying beneath the ordinary threshold (limen) of consciousness, as opposed to supraliminal, lying above the threshold.' His definition is rather non-committal, as was doubtless intended, in regard to anything, but the bare fact that the operations of that intelligence lie below the threshold of our everyday normal consciousness."

Several other distinguished psychologists replied to the inquiry of Mr. Bell, without, however, much change of expression from the brief quotations given above. No argument was advanced to prove the duality of the mind as some psychologists have attempted to maintain. Some remarkable instances of physical impressions and premonitions are related and ascribed to the action of the subliminal sense, by R. Osgood Mason, Neurologist and Author; also by Dr. Crothers. The former relates how a mother, who had sent her child out to play, was impressed with the idea that something dreadful was about to happen to it, and sent for her to return. When the child was asked where she was intending to go, said "to a place where she and her brother had found a pleasant spot on some rocks by the railroad the Sunday before." There was an accident there which killed several people at the very time the child would have been there if she had not been called back; and the latter, Dr. Crothers, reports the case of Prof. Martin, of London, who, after careful study and preparation, decided to go to India in a certain official capacity; but at the last moment he was impressed that it was a fatal mistake to go; and the sequel proved the correctness of the impression.

Two-thirds of mankind have tuberculosis, either latent or apparent; one-third die of the disease

THE THERAPEUTIC USES OF THE SUPRARENAL GLAND.

The employment of animal extracts was brought prominently before the profession when Brown Sequard announced to the world that he had renewed his youth by the repeated hypodermic injections of a fluid extract obtained from the testicles of lambs. The fad had its day. Many other animal extracts have been tried and for the most part found wanting; but there is one gland which probably has not received the attention to which it is entitled. Dr. W. H. Bates (Medical Record, Oct. 8th, 1898) after a series of experiments on the ductless glands, began in 1894 to use the aqueous extract of the suprarenal capsule in diseases of the eye. Its value in inflammation of the mucous membranes of the eyes, ear, nose and throat led him to believe that it would have a similar action in inflammatory conditions of other mucous membranes. He was also led to the belief that the extract was a valuable heart tonic from a study of its physiological action and the effects observed in a few cases in which evident symptoms of heart disease were relieved by its installation into the eye.

The extract must be freshly prepared when needed, for it is incompatible with preservatives and is weakened by heat. He prepares the fluid extract by mixing ten grains of the dried extract with two drachms of water and filtering. The filtrate is a one per cent solution of the extract. It is the most powerful astringent known. When a drop of a one per cent solution is instilled into the eye, the conjunctiva of the globe and lids is whitened in from forty seconds to two minutes. The pupil is not contracted or dilated, nor is a tolerance established by its use. It has no antiseptic or anæsthetic properties.

In stricture of the nasal duct its use has given good results. When the duct is closed by swelling of its lining mucous membrane the extract syringed into the punctum lessens the congestion, and the duct becomes open immediately, so that water may be made to pass through it freely. It often succeeds where cocaine fails. The success attending its use in stricture of the nasal duct has suggested its employment in stricture of the urethra, œsophagus, pylorus, etc. Dr. J. M. Otto used it in urethral stricture and found that it relieved the congestion of the parts sufficiently to allow the passage of a larger sound. An internal urethrotomy was painless and with-

out hemorrhage. Velich employed it in skin diseases and found that it produced local anemia when applied to the skin with or without a breach of continuity. Applied to a burn it turned the surface white, and prevented blistering. It whitened eczematous patches, and caused the hyperaemia of intertrigo to disappear. In small pox it has been used to prevent vesiculation and consequent disfigurament of the face. In pernicious anemia Dr. Douglas Stanley found in one case that the freshly prepared aqueous extract produced a marked increase in the number of red blood corpuscles. In heart disease the suprarenal extract is much more powerful than digitalis or ergot. Oliver and Schafer have proved it to be a tonic of the heart muscle. The tension can be increased enormously by intravenous injection, less markedly by its subcutaneous use; but its action is very uncertain when given by the mouth. Exophthalmic goitre has been materially affected by this remedy. Dr. George W. Crosby observed a decided improvement in the action of the heart and in the general muscular strength. The goitre had almost entirely disappeared, though the tumor was not very marked and the patient had gained considerably in flesh. One tablet of the extract representing eight grains was given three times a day. The best way to administer the gland is to place a few drops of the aqueous extract on the tongue. Dr. Bates sums up his conclusions as follows: "As a pure astringent in all inflammations, as a hemostatic, and as a tonic—I might almost say food—to all muscle fibres, especially the heart, no therapeutic agent has been employed which can compare with the extract of the suprarenal gland."

THE TRUE AIMS OF A MEDICAL JOURNAL.

It should have a high standard of excellence in all matters pertaining to medicine and surgery. It should not be only a gleaner in the fields of literature on the subjects discussed, but seek original theses of practical importance from the best authorities on diseases with which each is most familiar. It should criticise with knowledge and judgment, giving credit or blame justly with the reasons for the opinions expressed. In every respect it should have the six qualities of the ideal physician, viz: "Bold when sure; cautious in danger; kind to the sick; friendly with fellow-workers; constant in duty; not greedy of gain."

Progress of Medicine.

MEDICINE.

UNDER THE CHARGE OF
J. W. BELL, M. D., C. H. HUNTER, A. M., M. D.
J. H. STUART, A. M., M. D.
DAVID OWEN THOMAS, B. A., M. D., M. R. C. S.

CONGENITAL GENESIS OF TUBERCULOSIS.

Dr. James Nevins Hyde, in his presidential address before the American Dermatological Association (Journal of Cutaneous and Genito-urinary Diseases, September, 1898) in speaking of the medical progress of the year, said: "While the doctrines once held on the subject of the heredity of lepra have been greatly shaken by acceptance of the bacillary origin of the disease, it is noteworthy that in the last year the inheritance, or more properly speaking, the congenital genesis of tuberculosis seems to be securing a broad foundation. Tubercle bacilli have been discovered in the testes of tuberculous patients without other urogenital symptoms; artificial tuberculization of the placenta of guinea-pigs has resulted in the birth of tuberculous offspring. Congenital tuberculosis may be, in fact, set down as on the verge of actual demonstration." Dr. Hyde adds, that notwithstanding none of the several forms of tuberculosis affecting the skin are seen at birth, it is probable that the latent bacilli demonstrated in lymph-glands, etc., would become active disseminators of the disease later in life. In this light, he regards the origin of lupus vulgaris in children, in some instances, to be by congenital genesis rather than by contagion.

OXYGEN IN MORPHINE POISONING.

A very interesting case of poisoning by morphine is reported by Dr. D. T. Playfair (Lancet, Aug. 27th, 1898). The patient was a strong woman, thirty-seven years of age, who swallowed a solution of morphine acetate containing about 30 grains. When the patient was found at 10:40 a. m. symptoms of profound morphine poisoning were established, and she passed rapidly into coma. Steps towards resuscitation were begun at once. Ether was used hypodermically, the faradaic current applied, and the stomach washed out first with water and then with a solution of permanganate of potash. Afterwards a pint of strong coffee with one ounce of brandy was introduced. The faradaism failing to elicit any response hypodermics of atropia and strychnia were employed. Artificial respiration was practiced but produced no effect on the pulse or cyanosis. An enema of coffee and brandy was given and mustard applied to the cardiac region and the feet. At 12:45 p. m. oxygen by inhalation was commenced, which was continued without any sign of natural respiration until 6 p. m.,

when the patient began to make slight inspiratory effort—about one per minute. The oxygen was continued until 10 p. m. and the life of the patient was dependent upon it during the period of its employment. Dr. Playfair asserts that "nothing but oxygen was apparently of any value." He is inclined to believe that oxygen acts not only as a heart stimulant, but also possesses some direct oxidizing effect on the poison.

VIRCHOW ON HEREDITY.

The authorities of Charing Cross Hospital, London, where Prof. Huxley received his medical education, have honored his memory by an annual lecture. The first was delivered a year ago by Prof. M. Foster, who was the most competent witness of Huxley's early work and also of the development of biology, the special field of his activity. This year the "Huxley Lecture" was delivered in English by Prof. Rudolf Virchow, of Berlin, on the "Recent Advances in Science." The memory of Huxley, the pioneer biologist, and the fame of Virchow, the leading pathologist, conduced to make the occasion a memorable event in London medical circles. The social feature of the event culminated in a complimentary dinner to Prof. Virchow at the Hôtel Métropole where the representative members of the profession in Great Britain and Ireland were assembled. Lord Lister presided and acted as toast-master.

In the course of his lecture Prof. Virchow said (Lancet, Oct. 8th, 1898): "It is the custom to describe as hereditary all diseases which reappear in different generations of the same families. Thus, one speaks of hereditary tuberculosis and hereditary cancer. It is, in fact, not difficult to produce genealogical tables which demonstrate the recurrence of paternal maladies in children and grandchildren. Much trouble has been devoted—in my opinion without result—to the seeking of the germs of such diseases in the ovum or the semen. One is compelled to pass on to generations of cells which took origin after conception. As we pass from the time of conception the more numerous do we find the alterations in the formation of cells and in the formation of embryonic tissue. At the same time there is a greater possibility of the alteration having arisen after the formation of the first cells and hence that the existing cause may have commenced to act at that time. **If we set aside this** possibility nothing else remains but to assume that from conception from the organs which produce the disease a predisposition is transmitted which is already present in the earliest cells, even if it cannot be recognized in them."

THE ARREST OF PULMONARY HEMORRHAGE.

Dr. Walker Schell reports (New York Medical Journal, Oct. 1, 1898) the case of a woman in the advanced stage of consumption who was troubled with frequent and severe hemorrhages. Believing that the blood escaped from an eroded vessel in a cavity in the apex of the right lung he injected ("early in August") 85 cubic inches of nitrogen gas into the right pleural cavity to compress and immoblize the lung, according to the Murphy plan.

The introduction of the nitrogen at once arrested the hæmoptysis which did not recur to the time of his writing, Sept. 17th, 1898.

D. O. T.

OPEN AIR OR HYGIENIC TREATMENT OF CONSUMPTION.

The British Medical Journal of Oct. 1st, 1898, contains a discussion before the British Medical Association on the open air, or hygienic treatment of consumption, which is strikingly interesting because of the advanced views set forth in some of the papers in the line of what is rapidly becoming the common concensus of the profession, as well as for the utter disregard of some of our cherished hygienic rules.

Dr. Caverhill's paper on Sanatoria for Phthisical Patients is full of interest. The symposium contains papers on the treatment of this disease in South Africa, in New South Wales, in Australia, in the Riviera, in England, in farm houses, and at the sea side in properly constructed verandas.

Dr. Caverhill and Dr. Mander Smyth give us an insight into the management of patients in the Nordrach Sanatorium in the Baden Black Forest, and their papers are worthy of special consideration.

The results are as wonderful as the method is startling. The Nordrach is situated in the Black Forest, miles away from town and station, 1,300 feet high, surrounded by hills 1,500 feet high, so steep and rugged that only the stronger can make their way through or over them. The isolation of the place is held to be one of its chief merits, because patients are protected from the multitude of evils attending the crowded and frequented resorts. "The environment is considered of much more importance than the meteorological conditions."

The climate, as described, might be called "nasty," but then "climate and weather have but little to do with results." "The summers are hotter and the winters are colder than in England, the weather is changeable and the rain-fall is abundant." It has been proved by Dr. Felix Blumenfeld "that neither fogs, mists, cold, excessive rainfall, nor changes in barometic pressure had any appreciable influence on the health of consumptives" at the Sanitorium at Falkenskin. "The patients usually spend from seven to eleven hours daily in the open air, in spite of rain, fog, snow, and a temperature often as low as 12° F. below freezing point." Dr. Caverhill says, "Much was formerly made of frictions and cold douches in hardening the skin, and increasing resistance to colds and catarrhs; but the use of the latter has ben largely given up, and now hot or cold douches are given indifferently for

purposes of cleanliness. It is remarkable how quickly the hardening process is brought about, and in a few weeks, sometimes even in a few days, patients can rest and sit about till bedtime with wet boots, stockings, and trousers or skirts. At Nordrach in the Black Forrest, 1,300 feet high, clothes and boots are seldom changed, even if damp, after the morning walk. Patients of both sexes sit at meals and lie down for the prescribed periods of rest, and only remove their wet garments on going to bed."

But to render such a course of treatment possible, and to be able "To withstand the cold and exposure to draughts and stormy weather, and to oppose the enfeeblement and wasting induced by the disease, it is necessary to eat largely, first, of fats, usually butter; secondly, of sweets, farinaceous foods and vegetables; and, thirdly, of nitrogenous foods. If there be repugnance of food it is the duty of the physician to overcome it, and to stimulate the stomach which has become weakened by a too limited dietary both in quantity and variety."

The main features of the treatment, then, are mental and bodily rest, regulated exrcise (walking or hill-climbing), overfeeding (or what to the patient seems overfeeding), principally with fats, vegetables and farinaceous foods, and finally abundant fresh air."

If a patient on admission is much reduced in body with febrile symptoms, he is kept in bed, but with his windows in the room wide open, (or partially open if the weather is stormy); the room is thus flooded with fresh air, winter and summer, by day and night. "When his temperature has been normal for a week, he is allowed to be outside in verandas and pavilions, and when short walks are not followed by undue elevation of temperature, he gradually increases the distance to eight or nine miles, in which stiff hill climbing is often included. Walking must be slow, with frequent rests, and five hours a day are usually passed in this way."

RESULTS OF TREATMENT IN PRIVATE SANATORIA.

Knopf, from collected results of treatment in sanatoria in various countries, found, out of 4,500 patients, after an average of three months' treatment, that 630 were absolutely cured, 630 were relatively cured, i. e. made able to work with only slight signs of disease remaining; 1890 were improved, while 1350 were either not improved or had died.

Dr. Brehmer, founder of Sanatorium treatment, in a total of 5,000 cases, reports even more favorable results. Thus it is stated that by this method, of the well-to-do class fully one in four of consumptive patients has been "completely cured, or cured sufficiently to return to work with every apparance of good health."

"CHILLS" AND "TAKING COLD."

Dr. Mander Smyth, speaking of the "lamentable timidity of some writers in regard to 'fresh air,'" says, "It is indeed greatly to the credit of Dr. Walther (of Nordrach) that he has been the first to teach the absolute unimportance of the weather however bad, in the production of common cold, which he believes to be due to an infection somewhat similar to influenza, and also with regard to the state known as 'chill,' which in consumptives, in nine cases out of ten, means a relapse due to over exertion; this over exertion 'chill' or relapse rarely happens at Nordrach, and fresh acute cold or catarrh is never seen there, because the isolation and the open-air life render the chance of direct infection practically impossible. When occasionally a cold is taken, it is transmitted from a visitor or some member of the Staff, and can be traced to the village or station below."

"Patients are at once encouraged to discard overcoats, macintoshes, and all heavy clothing, in walking, whatever the season of the year, though for the sake of comfort they may wrap up as much as they like while at rest, but with open windows. No regard is paid to wearing sound boots or keeping the feet or clothes dry, nor even to wearing flannel next the skin; the patient's comfort being his guide in such matters." Sandals or thin canvass shoes are worn, winter and summer, and these are often soaked through in the first puddle. Dr. Smyth states, that while a patient in the Nordrach Sanatorium, on purpose to test the infection theory of 'taking cold,' he had worn wet shoes for days together, sat by open windows for hours in draughts when the temperature of the room was at freezing point, waded in ice cold water, etc., and that he failed as did the school boy who tried similar means to get a 'bad cold' that he might play truant.

APPLICATION OF THE METHOD.

Dr. Caverhill says, "It is indispensable in the first place that the patient be informed of the nature of his disease. With the improvement in his symptoms, which is usually rapid, he loses his depression and is soon thoroughly convinced that his only hope of safety lies in the most strict adherence to all its requirements. The physician regulates the supply of nourishment and sees that it is consumed. He prescribes daily the amount of exercise and repose, and he keeps a close watch on the temperature and circulation. His rule must be absolute and his authority unquestioned."

TREATMENT OF CONSUMPTION INDEPENDENTLY OF THE SANATORIA.

Dr. Calwell: "It is noticeable that the animals that suffer most from this affection are free when in the wild state. I refer to man and the milch or dairy cow; it is when they are herded together in close quarters that they suffer. * * * Tuberculosis is a disease of the transition period in which we are at present. A transition period from the open air life of the savage to that ideal hygiene of the future. It is this open air

life of the savage, combined with the hygienic comforts of our own age, and systematized with military precision, that the Continental Sanatoria compel the patient to live, and such is the specific treatment of consumption." J. H. S.

SURGERY.

UNDER THE CHARGE OF
J. H. DUNN, M. D., W. A. HALL, M. D.,
KNUT HOEGH, M. D.

LUNG SURGERY.

One of the most striking recent surgical papers is that of Dr. J. B. Murphy, read before the American Medical Association (Journal Am. Med. Association, July 23rd and 30th, Aug. 6th and 13th, 1898). It is a masterly analysis and summary of the "Surgery of the Lung," together with some original investigation upon the treatment of certain cases of pulmonary tuberculosis by intra plural injections of nitrogen gas for the purpose of securing collapse and quiescence of the diseased lung. Murphy maintains that immobilization and physiologic rest of the lung favor the healing of tubercular foci and cavities. If further experience should favor this basic proposition, his work will prove truly epoch making. His interesting experiments appear to have brilliantly established the practicability and safety of the technique and it only remains for time to decide how curative this mechanical quiescence shall prove. The author has issued this valuable paper in a reprint of 144 pages.

AMPUTATION FOR SENILE GANGRENE.

Dr. Stephen Smith, in a paper read before the New York Medical Association, advocates a modification of his well known joint amputation for application to senile gangrene of the foot. The object of the modification is to better preserve the blood supply of this region. In senile gangrene amputation above the knee has usually been advocated as more likely to get above the obstructed vessel and secure healthy and well nourished flaps, than amputations through the leg. Smith contends that the structures about the knee are more largely supplied with blood than any of the leg tissues, and if amputation be performed so as to preserve the eight arterial branches, the flaps will be well nourished.

His directions are to make a straight incision beginning two inches above the upper border of the patella, and carry it down from the center of that bone to the tuberosity of the tibia; from here two curved incisions having their convexities downward, one in the direction of the external, the other in the direction of the internal borders of the limb. These are joined posteriorly in the said incisions across the upper border of the calf. The flaps are dissected up from the bones of the leg, the patella is removed and the leg disarticulated. While there is probably no doubt of the general proposition that it is safer to amputate at or above the knee in senile gangrene, than through the leg, yet, the reviewer has, in a typical case with complete mortification of nearly the whole foot and the most striking arterial sclerosis, had very excellent healing of the stump made at the junction of the middle with the upper third of the leg. In this incident, the arteries were at once examined and the point of obliteration found below the point of amputation, otherwise, with the intention to reamputate immediately at the knee.

THYROIDECTOMY IN GRAVES' DISEASE.

In the Medical Record of August 2nd, Dr. Arthur Booth reports his results obtained by thyroidectomy in eight cases of Graves' disease. The operation was followed by cure in five of the eight cases, one death, one improved and one not improved.

There seems to be considerable surgical testimony in favor of, and an increasing tendency to resort to partial thyroidectomy in this disease, especially in those cases in which the thyroid enlargement is marked and precedes the tachycardia. It is worthy of notice that Booth says "One has been improved, and in this case it is worthy of notice that the operation was performed only six months ago, so that we may expect still further improvement and perhaps a cure, for the longer the period after operation, the better appear to be the results. As profound a clinician as Hilton Fagge, after summing up the prognosis in Graves' disease, long ago, said: "The only possible inference seems to be, that most cases end in recovery."

The reviewer has observed several very troublesome cases which recovered in from eight months to two and a half years, upon hygienic and various modes of treatment. Hence until the results of surgical treatment of this affection are more decided than they yet appear, some suspicion must be entertained that the results are largely coincidents.

MOVABLE KIDNEY.

In "The Record" of August 13th, Max Einhorn writes entertainingly on movable kidney.

He opposes nephrorrhaphy, except in rare instance, preferring a treatment of the gastric and intestinal disturbances by modern methods, and promoting nutrition and proper bandaging. The digestive disturbances are by no means entirely due to the movable kidney. In fact, such disturbances are not more markedly frequent in subjects with movable kidney than in others with normally fixed kidneys. He has not found the results of nephrorrhaphy in any respect better than those of modern medical treatment. Indeed in some instances after nephrorrhaphy, the symptoms have been worse. He advises that only when a connection between the symptoms and the renal movability appears to be proven in

a high degree, and after dietetic-mechanical treatment has failed, should nephrorrhaphy be resorted to.

The views of E' though possibly leaning a little heavily to a medical extreme, appear to the reviewer much nearer the truth than the extreme surgical views of Edibolds and many others. Nephrorrhaphy is a most useful procedure in certain cases—in a few even a necessary one, but anything like a routine application of it to every movable kidney, is productive of not very unequal parts of good, no-good and harm.

GUNSHOT WOUNDS BY MODERN MISSILES.

The brief war with Spain has revived the ever fascinating topic of gunshot wounds. Among the many recent articles upon the subject, that of Dr. Roswell Park (Buffalo Med. Journal, Aug. 1898), "Gunshot Wounds Made by Modern Missiles and their Treatment," is especially entertaining. As to the effect of the new ball on particular tissues, he says: "In the skin, under ordinary circumstances, there will be little or no difference between the wounds of entrance and exit. If such a ball pass through a blood vessel of the larger class, the edges of the wound will be so clean cut that no retraction of the inner coat can take place; consequently, no spontaneous cessation of bleeding can occur. In other words, a wound of a large vessel will be quickly fatal unless bleeding be promptly checked. In the muscles the explosive action of these bullets will be least marked, unless the bone be also shattered. In the bones the explosive effects will be most marked at short range, for reasons which I have already alluded to. Beyond 400 yards' range they will be less so, while, again, at long range there will ordinarily be less shattering and comminution than the old balls used to produce, and a clean penetration will be the rule unless the nodal point is struck. In the joints themselves the small bullet rarely makes a severe injury, save by shattering the bone. In the skull up to 1,200 to 1,500 yards complete shattering of the bone and disruption of the brain will take place. At short ranges the destruction will be even more terrific, and the head so struck will lose all resemblance to a human skull. In the chest clean perforation of the lungs will ordinarily take place, unless pieces of bone are driven in. What may occur in the heart has been already alluded to. Tendons, unless struck squarely, are pushed aside by the bullet. The abdomen may be perforated even at the longest effective range of a weapon, and multiple perforations of the intestines, with often complete destruction, may take place. The soft organs, like the liver, spleen and even the kidney, may become pulpified.

Thus it will be seen that the non-fatal wounds of the future are likely to be less severe and to heal more rapidly and with fewer complications, also to require less radical treatment than those produced by the old bullets. That is, gunshot wounds inflicted by the new weapons will largely resolve themselves into two classes, the horribly destructive and the less severe (Davis, Annals of Surgery, Vol. XXV., p. 36).

What I especially want to condemn is the indiscriminate, thoughtless and usually injurious use of the probe. There is no lesson which it may teach upon the battlefield which cannot be learned without it, while the objections to its use are many. It is rarely, if ever, clean; it stirs the blood clots and tends to reproduce hemorrhage; it permits access of air to the deeper parts and it rarely gives information which is of any real service at the time. In the hands of most men it is a dangerous instrument and it would be well if we left it out of the ordinary pocket case or military surgeon's outfit. It is an instrument to be used, if at all, in a division hospital and not at the front. Even should the bullet be touched with it the surgeon who uses it rarely has at hand the means for removal of the ball when he finds it. In civil practice I have seen great harm come from its use; how much more, then, may happen in military work. If an important cavity be entered by the ball that fact can be appreciated without the probe; if a large vessel be divided, probing the wound will only stir up fresh blood. If nerve trunks have been cut across, the probe is not needed for detection of the fact, and four times out of five the ball has come to rest in a place which cannot be touched by the probe, even were there no other objection to its use.

In conclusion I would only say that the rules of military surgery are the rules which for the most part are necessary deductions from the teachings of the civil surgeons, and that they are the simplest of all formulæ which can be carried out to meet emergencies. By their judicious practice many lives will be saved, and we will hear much less of sepsis, erysipelas, hospital gangrene and tetanus than ever before in our campaigns, and will have warded off the greatest dangers which have in time past threatened our brave soldiers and devastated our military hospitals.

J. H. D.

THE X-RAY IN FORENSIC MEDICINE.

In an able paper upon this subject (The Medico-Legal Journal, September, 1898) Dr. Frank Ward Ross of Elmira, N. Y., points out many of the difficulties in making the results of x-ray photography competent evidence. He states that he has never been allowed to place a picture in evidence in a criminal trial, the presiding judge, on one occasion, excluding it on the ground that the picture was not an exact representation, and could not be verified, etc. He cautions those using the x-ray to take unusual care in giving an opinion of a case without the consent and knowledge of the attending phy-

sician, particularly where a suit for mal-practice is likely to ensue, or is in the possibilities. The same precautions should be observed in taking pictures to be used in cases in which suits for damages have been brought against a corporation. The consent, and also the presence of the attending surgeon at the time the picture is taken, should be had, if possible. If the question of age or non-union of bone presents, the following points should be considered:

It is well known that adult bones can be readily distinguished from those of children, or from bones which are not fully ossified. Do not mistake an incompletely ossified bone for a fracture, or vice versa. A case in France was decided against a corporation, on the evidence of a skiagraph, which showed the bones had not been united, although there was no other evidence than the picture. This was incorrect, as bony union in fractures takes, in some cases, months or years to unite—some never completely ossify. This must always be considered. Here the decision was in error, as there were no physical signs of fracture existing. Hence we should never accept, as an assured fact, that we have an united fracture or deformity, when other evidences are wanting or are even negative; especially if the patient's subjective symptoms are liable to be biased with the prospect of indemnity. In estimating the amount of the damage done, not only must we always compare the injured with the sound side, but remember that some deformities, like those of the wrist-joints, may be quite extensive, perfect co-adaptation of the bony parts having been made, with perfect union of bone, yet deformity exists, (particularly true in Colles fracture). Again, our failure to see the cause of the deformity, in the X-ray, is not evidence that it does not exist, if other symptoms point to its being present. (The contrary line of reasoning in the French case cited). The reason for this is obvious; the traumata of the soft tissues are often, (particularly in the fractures at the wrists), of greater importance than fractures of the bones. The X-ray has caused us to look at bones and joints from a very different standpoint than formerly. We must, as competent witnesses, be well versed in the conditions existing, the surgical anatomy of the part, and landmarks, aside from and independent of the additional evidence by the X-ray.

Fractures and deformities may exist which, from the position, line of fracture, effusion of blood, or character of deformity, will not furnish evidence in a skiagraph or fluorascope. Again, failure to get an X-ray, or to get a fluorascope view, will, in some cases, occur from faulty manipulations; machinery being out of order, insufficient power, or adverse atmospheric conditions. Hence failure may occur at one time and success at another. It is essential in all cases where tissues, other than those of the arms or legs, are to be examined, (particularly in the trunk or the head), for bullets, that photographic and fluoroscopic observations should be taken from two or more points of view, at right angles to each other.

While the use of the X-ray is of inestimable value to us in making diagnoses, it is not an unmixed personal good. If it increases our diagnostic ability, it also increases our responsibilities, and we are more exposed to suits for malpractice in fractures, particularly if deformity exists, and we have not used it as a means of diagnosis, also in dressing and examination after reduction.

Again, the so-called X-ray burn is no small factor, not only in the minds of the laity, but also of the court, and is an actual source of danger, and must always be considered, guarded against, and avoided by proper precautions, by suitable apparatus, not too long exposure, with perfect insulation of the patient, and if necessary, an aluminum or celluloid screen. Dr. Ross has never seen an X-ray burn where a static machine was used, and believes its dangers to be over-estimated.

Neither can we ignore the possible harm which might result in using it in cases of open wounds or injuries to the brain. In a case in which Dr. Ross used this method, (the resulting skiagraph was taken after the man's death, three weeks later), the employment of the X-ray was used as a defense, on the ground that it seriously jeopardized the man's chances, and that, with the use of ether anesthesia to keep him quiet, was not only seriously condemned by the defense, but the danger was so portrayed, that with the rulings of the court and other circumstances attending the case, the prisoner was acquitted of the charge of deliberate murder, and the use of the X-ray was a great factor in bringing about this verdict. His greatest consolation, in this case, was that the same argument would have been used had he failed to use the X-ray to locate the bullet. Had the case died, without an X-ray examination, then the omission would have been claimed as neglect. As it was, it was argued that it was a source of extreme danger to the patient, jeopardizing his chances and leaving a "reasonable doubt" in the minds of the jury, as to whether he might not have recovered had the X-ray not been used. All this was in spite of positive demonstration that no harm resulted from the X-ray or ether,—the man living three weeks after the exposure, and dying of meningitis, which existed at the time the examination was made, due to the presence of a bullet in his brain. W. A. H.

The expert surgeon always ties arteries, the amateur invariably ligates them. The tyro speaks of the main cause as the "Predominant etiological factor;" but a hard-headed country doctor advises in operating for rupture, to "cut through the Latin names and get down onto the gut as quick as you can."

GYNECOLOGY.

UNDER THE CHARGE OF
A. W. ABBOTT, M. D., F. A. DUNSMOOR, M. D.,
J. H. RISHMILLER, M. D.

A CASE OF UTERO-VESICAL FISTULA WITH UNCOMMON ETIOLOGY.

Rudolf Savor (Cent. fur Gyn. No. 49) reports an unusually interesting case of this description. The patient was thirty-four years of age and had borne two children. Menstruation had commenced at 21 and had always been regular, although painful. She was first delivered in 1892 of an average sized child by Caesarean section. The uterine incision was closed with silk sutures. Her second gestation commenced in January, 1897, and during the latter part of August she experienced vague labor pains which induced her to consult the author.

The patient was a small, weak and poorly nourished individual, whose bony structure showed evidence of a former rachitis. A great deal of hydramnios existed, and the uterine fundus extended to the upper limits of the xiphoid cartilage. The pelvis was of the flat rachitic type, and the conjugate vera was estimated to be 7½ cm. Foetus in first vertix position. Temperature and pulse normal. The urine was cloudy and ammoniacal, and contained considerable albumen, but no blood.

On the evening of her admission the patient began to complain of considerable dyspnoea, which increased during the following day accompanied by diffuse bronchitis with elevated temperature and accelerated pulse. Her condition became alarming, and in consideration of the flat rachitic pelvis, it was deemed advisable to induce premature labor, which was then presently brought about by puncturing the membranes. The liquor amnion drained off gradually and the dyspnoea lessened; but her general condition did not improve. She had a slight afternoon rise of temperature evidently due to a moderate degree of sepsis. The labor pains were slow in developing, and finally the foetal heart became inaudible. On the second morning after the puncture of the membranes, the labor was terminated by the birth of a small dead child. The placenta was expelled 15 minutes later. Hot uterine irrigation and a hypodermic injection controlled the moderate hemorrhage. The patient was catheterized and bloody urine withdrawn. The pulse became small and frequent. About one and one half hour post partum, the patient suddenly attempted to sit up, but fell back directly, became pulseless and died within a few minutes. No cyanosis. The autopsy pointed to sepsis as the cause of death, with its starting point in an endometritis which had developed sub-partu. The author found the bladder adherent to the anterior uterine wall at the lower end of the cicatrized incision (Caesarean section). He found a vesico-uterine fistula, patent and lined with a decidual membrane, at the point where the lowest silk suture had been introduced for closing the Caesarean incision. The bladder showed chronic cystitis and contained a phosphatic calculus, the nucleus of which was a silk suture. He explains the formation of the fistula as follows: A small abscess had probably developed about the suture and then adhered itself to the bladder. Subsequently ulceration and perforation of both the vesical and uterine parieties followed. The suture evidently escaped into the bladder, forming the phosphatic calculus and setting up the ammoniacal cystitis. The author believed this had occurred during the first year after the performance of the Caesarean section.

TOTAL INVERSION OF THE UTERUS.

Josef von Chrzanowski (Cent. fur Gyn. No. 42) reports a unique case of total inversion of a non-puerperal uterus in a woman fifty-five years of age. She was the mother of eleven children and all of normal birth. Eighteen years ago she had been last pregnant, which terminated in a miscarriage, ad vanced to four months. This was accompanied by profuse hemorrhage, necessitating a bed confinement for many weeks. Five years ago a sudden profuse flooding took place without any assignable cause.

During the past three years the patient had experienced a gradually increasing dragging sensation in the pelvis, which finally terminated in the protrusion of a profuselv bleeding tumor, about the size of a fist, from the genitals. This protruding tumor was attached by a narrow pedicle to a second one which showed itself just between the lips of the vulva. After failing to find the fundus by careful abdomino-vaginal palpation, and after failing to discover the mouths of the Fallopian tubes in the proximal neoplasm, th eauthor made a diagnosis of inversio-uteri, with the tumor attached to the fundus. The pedunculated growth was first removed by the Paquelin cautery and three days later he undertook the radical operation under the strictest antiseptic precautions. In order to prevent excessive hemorrhage, he applied and tied a rubber tube about the uterus as high up in the vagina as possible. A horizontal incision was made in the fundus which opened directly the artificial cavity and exposed the tubes which were tied with silk ligatures and then freed by incision. This gave access to a portion of the broad ligaments which were treated similarly to the tubes. Finally the upper portion of the fundus was resected, thus allowing a further section of the ligaments; and so the procedure continued with alternate morcellement and ligation until the cervix was reached. The anterior and posterior walls were then sutured which included all the stumps. Convalescence was uneventful as far as the pelvic conditions were concerned; but the patient developed a croupous pneumonia and for this reason remained in the hospital for

four weeks. The neoplasm attached to the fundus proved to be a myoma. Microscopic examination showed that the wall of the uterus had undergone fatty degeneration and not a trace of muscular structure remained.

FOREIGN BODIES IN THE UTERUS.

Mittermaier, Hamburg, (Cent. fur Gyn. No. 48) mentions that literature contains but scat tered reports of cases of foreign bodies in the uterus. They are usually introduced into the pregnant uterus with the intention of producing criminal abortion. Among these foreign bodies he mentions hair-pins in particular, and instruments which have been broken off during topical treatment. He has recently had two cases under treatment which he considered of sufficient interest to report on account of their peculiar mode of production, the treatment employed and therapeutic lessons thereby deducted.

The first case, a multipara, thirty years old, sought advice for the relief of a very maloderous discharge. Her anamnesis elicited that one year previously she had undergone an operation for the removal of a submucuous fibroma; a silk ligature having been passed around the pedicle and the neoplasm then simply snipped off below. Some irregular hemorrhage was encountered for several days which was finally controlled by thorough tamponade. This was shortly succeeded by a maloderous discharge and chills and fever,—making the patient more miserable than before the ablation of the tumor. Recently the hemorrhage had increased. Bimanuel examination disclosed a uterus with a submucous and several small subserous fibroids. Two masses were also detected in the cul-de-sac which were diagnosed as pyo-salpinxes. The author removed the uterus and appendages by the vaginal route. Upon incising the uterus he found, near the right tubal orifice, a small submucous fibroid about whose pedicle there was a loosely-tied silk ligature, the same evidently that had been applied a year previously. The ligature had entirely retracted into the uterine cavity with the retraction of the remaining portion of the partially removed neoplasm. This ligature must have been the cause of the infection that produced the salpingitis and offensive discharge. All this would have been avoided by thorough erasion of the pedicle from the uterine wall.

His second case was a woman thirty years old in whom curettage had been undertaken for hemorrhage of a non-gravid uterus. While irrigating the uterine cavity the glass catheter accidentally broke. The fragments became so firmly imbedded that all attempts to remove them proved of no avail. The patient was then referred to the author. He found the cervix contracted, and after redilation attempted first digital and then instrumental extraction with futile result. The uterus was then drawn into the vagina through an incision in the anterior vaginal wall. The anterior wall of the uterus was split from cervix to fundus with scissors. Five fragments of glass were found imbedded in the mucous and muscular coats of the organ; the largest of which measured about three cm. After the extraction of the fragments and the curettage of the uterine cavity, the incision in the uterus was closed with cat-gut sutures. The uterus was then replaced and fixed to the anterior vaginal wall. All wounds healed by first intention. J. H. R.

WHAT ARE THE PROPER LIMITATIONS FOR ALEXANDER'S OPERATION?

It will save time to first consider in what cases this operation is positively contra-indicated.

1st. Ante and lateral flexions.

Although this operation was never intended for these cases, it has been done, but unwisely, in the writer's opinion, for the reason that, in ante flexions, the position of the fundus is not materially changed, and there is no counter force sufficient to correct the shape of the organ. In lateral flexions, if productive of symptoms, there is always some more serious condition requiring the opening of the abdomen.

2d. Retro-displacements of the uterus, complicated by tubercular peritonitis.

Here, the tubes and ovaries are likely to be implicated, and the peritoneal affection is of so much greater importance, that it should be treated by abdominal incision, and the displacement attended to at a later date, if the patient fully recover from the tuberculosis.

3d. Displacements due to the pressure or weight of tumors, for the removal of these will almost invariably cure the false position.

4th. Prolapsus of such a degree that the cervix appears at the vulva.

The operation has generally proved a failure in these cases, which can be better treated by repair of the pelvic floor, and, if extreme, supplemented by peritoneal suspension.

The above considerations narrow the subject down to three conditions for which the applicability of Alexander's operation may be discussed.

First. Uncomplicated retro-displacements, and, by this, we mean retro-displacements without pelvic inflammation or other disease, and where replacement of the uterus will also replace the ovaries.

Second. Simple retro-displacement, but accompanied by a mesovarium so lengthened that a reposition of the uterus will still leave the ovaries in Douglas' sac.

Third. Retro-displacements accompanied by pelvic inflammation or resulting adhesions.

Of the first condition, i. e., uncomplicated retro-displacement, it may be said that it is the undivided opinion of those who are practically familiar with the operation, that, from all points of view, Alexander's operation is considered the ideal treatment.

Second. Retro-displacements with lengthened mesovarium. The operation, if done, should be preceded by an abdominal opening for the purpose of shortening the mesovarium. The temptation is, of course, great, when the abdomen is already opened, to fix the uterus with a suspension, but because the anatomical relations are more perfect, the woman more likely to conceive and less likely to abort or to have a complicated labor, the writer prefers to close the abdomen and make the Alexander at the same sitting.

Third. Pelvic inflammation complicating retro-displacements, if not so extensive as to require removal of any of the organs, may be very satisfactorily treated by breaking up all adhesions through a posterior vaginal incision, and then making the Alexander operation. A small amount of pus in the tubes or in Douglas' sac, need not deter one from this procedure, provided he has sufficient skill to know when all adhesions are separated and to leave all the organs in proper position, and to provide for efficient drainage. Retro-displacements with large accumulations of pus, or extensive disease, high in the pelvis, should be treated by the abdominal route.

The above remarks apply, of course, only to chronic displacements. A. W. A.

OBSTETRICS

UNDER THE CHARGE OF
J. W. DUDLEY, A. M., M. D.

TREATMENT OF PUERPERAL SEPSIS.

Dr. Paul F. Mundé in his president's address before the American Gynecological Society spoke at length on puerperal sepsis. He emphasizes the uselessness of most medical treatment. Large doses of quinine never influence the temperature more than momentarily. Coal tar derivitives have but a temporary effect, and the use of saline purges to eliminate the poison is merely a matter of historical interest. Ergot to keep up a steady contraction of the uterus may be of some value if the stomach is not thereby deranged; a few hypodermic injections of ergot judiciously administered would be more effective. The abdominal ice bag is often of use. He has had experience with the hypodermic injection of antistreptococcus serum in three cases all of which though desperate and failing to respond to any other remedies recovered with three to six hypodermics of ten cubic centimetres of serum at intervals of four to twelve hours. He believes there is no particular risk in using these injections, and in severe cases in which the focus infection has evidently passed from the pelvic organs they might be of service and should be tried.—American Journal of Obstetrics, July, 1898.

The American Year Book of Medicine and Surgery thus summarizes the serum treatment: "Serumtherapy of puerperal sepsis has commanded a vast amount of attention during the year and thus far has not given the desired results. In fact it appears to be a very doubtful method of procedure."

SCHENK'S METHOD OF INFLUENCING THE SEX OF THE FETUS.

According to the American Journal of the Medical Sciences for October, 1898, this much discussed theory of Schenk, of Vienna, is as follows: The sex depends upon the condition of the mother's nutrition during the first four months, perfect nutrition produced by attention to the mother's diet producing males. An excessively nutritive diet causes sugar to appear in the urine and in order to prevent this the urine should be examined frequently for sugar, and the diet regulated accordingly.

SYMPHYSIOTOMY.

In Annales de Gynécologie for March, 1898, Lepage reports eight symphysiotomies, and in the same journal for April, Pinard reports seven. Of the total fifteen two children and one mother died. The causes of death in the infants were pressure upon the cord, and pressure during extraction in one case, and fracture of the skull in the other. The maternal death was due to sepsis, including a septic infection of the symphysis. Of the mothers one suffered for a time with urinary incontinence, and threatened phlebitis; several cases of lacerated vaginal walls occurred. A few were delivered spontaneously after the operation; but in most cases forceps or version was employed. In two cases symphysiotomy had been done at previous labors, and in one case the scar tissue left from the former operation was so firm that there was difficulty in making the sectional separation.

EFFECT OF SYMPHYSIOTOMY ON A SUBSEQUENT LABOR.

Hausen in Rev. Mens. des Mal de l'Enf., Feb. 1898, cites an interesting case with the following history: The first labor was instrumental, the child being still born. The second labor terminated by symphysiotomy with separation of the symphysis six centimetres and forceps delivery, after which the patient made a good recovery and returned to work. Three years later, being then at the age of thirty-six, she was again confined at full term; the child was in the transverse position and was delivered spontaneously after turning. The symphysis separated three centimetres during the delivery. No harm followed either of these deliveries. Five weeks after the second labor she was able to walk a mile without discomfort. When the case was reported a separation of half an inch remained.

THE RELATION OF THE BLADES OF THE FORCEPS TO THE AXIS OF THE FETAL HEAD.

In the Lancet, Sept. 24th, 1898, J. M. Kerr, of Glasgow, takes exception to

"Present day teaching of applying the blades of the obstetric forceps with exclusive reference to the transverse diameter of the maternal pelvis." Even in the high forceps operation and in cases of flat pelvis it is always possible to guide the blades to some extent into a position favorable to the child, i. e. as nearly transverse to the anteroposterior diameter of the head as possible. While at the brim it is nearly always impossible in spite of all one's efforts to grasp the head biparietally, a deliberate effort to apply the blades as nearly as possible in this position will result in less frequent slipping of the blades, and less reapplying than if one follows the method of simply introducing the blades into the transverse diameter of the pelvis and making traction without regard to the manner in which the head is grasped. This latter method, he states, has been the teaching, with a few exceptions, for the past thirty years.

[The point in this article is one often lost sight of in forceps operation, but the method here described of applying the blades with total disregard to their position on the head, is certainly not the method generally taught in this country, whatever may be the case in Scotland. J. W. D.]

CLINICAL REPORT OF THE ROTUNDA (DUBLIN) LYING-IN HOSPITAL FOR THREE YEARS.

This report contains many interesting statistics. There were 4,006 cases delivered in the hospital with 14 maternal deaths, six being due to sepsis, six to kidney disease, one to valvular heart disease, and one to hyperemesis. There were 134 abortions with two deaths. Of 125 breech presentations 41 were still births; forceps was applied to the after-coming head but once. Large white kidneys were found in two of the three fatal cases of hyperemesis. There was one case of rupture of the uterus which was treated by removing the placenta by hand from the abdominal cavity, and leaving a strip of iodoform gauze in the tear for two days; the case made a good recovery. Postpartum hemorrhage occurred 49 times, of which 21 were severe cases. The treatment for hemorrhage depended upon the cause; some responded to ergot and external massage of the uterus, some were treated by the hot douche, 24 by removing the placenta and membranes by introducing the hand into the uterus; in these the uterus was plugged. No mothers were lost in 31 cases of placenta previa, though all the children, except nine, were stillborn. In the treatment of these cases of placenta previa a foot was brought down to plug the lower segment of the uterus in 20 cases and forceps were applied once. Craniotomy was performed three times, Cæsarean section once, symphysiotomy once, version 42 times, of which 18 were for placenta previa, twelve for shoulder presentation, and 18 for prolapsed cord. Forceps was used 117 times or once in 34 cases. Eclampsia occurred nine times with a mortality of three mothers and four children.—Dublin Journal of Medical Sciences, April and May, 1898.

ADVOCATING THE MORE GENERAL USE OF THE CÆSAREAN SECTION.

A most instructive discussion followed an interesting paper by Dr. Edward Reynolds, of Boston, read before the Section of Gynecology of the College of Physicians of Philadelphia, in which he vigorously advocated the proposition that "the maternity mortality of the Cæsarean section has now become so low that its performance is justified in all cases in which a mechanical obstacle renders the delivery of an otherwise healthy woman by the usual obstetrical operation more than ordinarily difficult and dangerous."

In maintaining his thesis Dr. Reynolds thought his experiences gained by personal observations were more reliable than those deduced from statistics; and he bases his argument upon 22 cases of Cæsarean section on which he himself had operated or of which he had personal knowledge. In these 22 cases all the mothers recovered, and all the children are now living except one, which was born alive but died afterwards from inherent weakness. He believes as a result of the experience of the Boston Lying-in Hospital that in the hands of experienced men the intrinsic mortality of the ordinary obstetric operations is less than one per cent. in healthy women not exhausted by long labor. In the case of Cæsarean section his experience leads him to believe that under similar conditions in favorable cases the mortality (maternal) is not over one per cent. The question therefore turns on which offers the less fetal mortality. His conclusion based upon the experience of the same hospital is that difficult operative deliveries give a fetal mortality of 30 per cent. and induced labor before term of 10 to 20 per cent. In the Cæsarean operation the mortality under the best conditions will be but a fraction of one per cent. The Cæsarean operation thus giving under the best conditions, and in the hands of competent operators, practically the same maternal mortality as the common obstetric operations in difficult cases, for; the fetal mortality being greater in the common operations, the Cæsarean operation should be the operation of choice when circumstances are favorable.

Briefly stated his conclusions for the guidance of the general practitioner are as follows: 1st. "No man should recommend or undertake the Cæsarean section unless he is able to make preparation adequate for the performance of any abdominal operation, and to secure proper assistance." 2nd. "In unfavorable cases the maternal mortality is too high to justify its performance for the sake of the child." 3rd. "In cases in which the delay incident to all the preparations necessary for Cæsarean section would necessarily be fatal to the child, forceps or ver-

sion should be done; but in subsequent pregnancies preparations for a Cæsarean section should be made before the woman is allowed to go into labor." 4th. "In cases in which previous labors have resulted in still-born children by high forceps, or version performed for simple delay, the question of Cæsarean section should be settled in advance of labor upon the rules already laid down." 5th. "The decision as to the choice of operation is the only point demanding exceptional experience; the operation itself may be performed by any man who has had a fair experience in abdominal surgery."

Discussion: The paper was discussed by Drs. Williams, of Baltimore, Duer, Hurst, Noble, Morris, Boyd and Davis. Much diversity of opinion was expressed, but on the whole the discussion showed an unfavorable feeling toward the radical extension of the method advocated by Dr. Reynolds. The chief criticisms advanced were as follows: The mortality rate of Dr. Reynolds is lower than can generally be obtained; one can not tell in advance with a given contracted pelvis what will be the result of normal labor; the approbation of the public could not be obtained in the class of cases advocated by Dr. Reynolds; tentative application of the forceps will often show that delivery can be accomplished by the vagina in a large number of cases of contracted pelvis, especially with a patient in the Walcher position; the induction of labor two to four weeks before term is a safe method to persue in cases of moderately contracted pelvis, and it offers no greater mortality to the child than five per cent; the stimulation of the general practitioners throughout the country to undertake Cæsarean section would be followed by tragic results; symphysiotomy is "simpler, less dangerous, and very efficient in proper cases" when performed before prolonged and useless efforts have been made with forceps.—The American Journal of Obstetrics, June, 1898.

[The above discussion serves at least to indicate the g reat variety of conflicting opinions held at present by prominent operators as to the best method to pursue in difficult deliveries. In this connection the following from the American Year Book of Medicine and Surgery, 1898, is of interest; it relates to Symphysiotomy: "The wave of reaction has begun, and the operation is limited now to but a very narrow scope, largely because of the difficulty of its performance, and because of its higher mortality than Cæsarean section." The logical conclusion of the whole matter seems to be that the time is not yet ripe, if indeed it will ever be, for the general abandonment of craniotomy.—J. W. D.]

Dr. Lucien Howe, in studying the U. S. census reports, finds (American Journal of Ophthalmology, Oct., 1898) that in all the cities of over 50,000 inhabitants the average of blind persons is 33 per cent less than the average for the entire country.

PEDIATRICS.

UNDER THE CHARGE OF
H. B. SWEETSER, M. D.

During the past ten years the importance of more special study of the conditions which surround infancy and childhood has come more and more to be appreciated, and the work done in this direction and the data accumulated may be looked upon as remarkable and as an earnest of the good which will result therefrom in the near future. There can no longer be a question as to the propriety of considering pediatrics as a special department of medicine, its claim as such resting, as Dr. Holt in a late address aptly says, "on the fact that it is devoted to the problems connected with diseases and conditions in the first years of life."

Of all the epochs which comprise the cycle of life, that which begins at conception and ends at maturity is fraught with most importance to the race, for upon the conditions which prevail during this formative period depends the success or failure of the individual and indirectly of the race. Given a healthy heredity, a normal development and an environment conducive to proper growth, and there is assured a perfect adult who in turn will pass on to his posterity his normal type. Up to the present the task of procuring such ideal conditions has largely, of necessity, gone by default to the ignorant supervision and hap-hazard methods of the untrained. Heredity we are forced to take as we find it; developmental vices follow in the wake of bad heredity; but surely we may hope to do much to obviate the disasters of a bad environment and hygiene, if only we knew wherein the errors lie. Herein lies the scope and function of the department of Pediatrics. Very recent years have witnessed much earnest effort by able and educated men to brush away some of the darkness of the past and let in the light of scientific truth. Special textbooks and journals, wholly devoted to the study of the development, health and pathology of childhood, are being rapidly multiplied; numerous societies are being organized for the proper discussion of all departments of the subject, and the colleges have begun to insist that their graduates shall know something of the proper directing of this formative period; and post-graduate schools devote much attention to its elucidation to older men.

RISE, PROGRESS AND PRESENT NEEDS OF PEDIATRICS.

Dr. Crozen Griffith, of Philadelphia, delivered a valuable address on this subject at the recent meeting of the American Medical Association which should prove of value and interest to all interested in diseases of children. The reason that pediatrics developed so slowly as a specialty, he thinks, was probably due to the grave mistake of viewing the child as only a little man,

of imagining that the teaching of the principles and practice of medicine gave ample preparation for mastering infant's disorders, and later, of making the curious assumption that because a physician understood the diseases of women he must therefore necessarily have special cognizance of diseases of children—a view still prevalent in some quarters, but waning rapidly.

Pediatrics has developed through the production of special textbooks and journalistic literature on pediatric subjects; and, much more recently, through the establishment of special hospitals for children, special medical societies to study their diseases, and of special instruction to undergraduates.

The first book devoted solely to the subject was by Demetrius of Apaiia, about 260 B. C., entitled "De morbis puerorum." The first book written in England was by Thos. Payn, 1569, called "The Regiment of Life: whereunto is added a Book of Children." In the United States the first pediatric monograph appears to have been by Chas. Caldwell, 1796, upon the identity of hydrocephalus, cyanache and diarrhoea infantum. In 1825 Dr. Dewees published his work on children. Since then books on pediatrics have multiplied rapidly, and among them may be mentioned those of Condie, Eberle, Meigs, I. Lewis Smith, Jacobi, Rotch, Holt, Starr and the "Cyclopedia of Diseases of Children," edited by Keating.

In journals the United States is well represented: "Am. Journal of Obstetrics and Diseases of Women and Chrildren" first appeared in 1868; "Archives of Pediatrics," in 1884; "Annals of Gynecology and Pediatry," in 1890; "Pediatrics," in 1895.

The first hospital of any sort was founded in London in 1769, and was named, "The Dispensary for Sick Children." In 1852 the Great Ormund Street Hospital was founded in London, and at that time was the only hospital in England or America devoted to children. The first in the United States was the Nursery and Child's Hospital in New York City in 1854. Now the hospitals, homes, asylums, sanitariums, and children's wards in general hospitals are very numerous.

Pediatric societies are of very recent date. England still has none, although the British Medical Association usually has a pediatric section. There is not one in Germany or Austria. France has one, very recently organized; and Russia has two. The United States is more progressive. In 1880 the American Medical Association established its Pediatric Section, and in 1887, the New York Academy of Medicine started its present Pediatric Section. The American Peditaric Society was established in 1888, with Dr. Jacobi as its first president. Ohio in 1895, and Indiana in 1897, established state pediatric societies. St. Louis in 1895, and Philadelphia in 1896, organized secieties devoted to pediatrics.

Concerning the teaching of the treatment of Diseases of Children in Medical Schools, Europe is well equipped, there being full professorships in nearly all. In England little attention is apparently paid to the teaching of pediatrics. In the United States the first special chair devoted to diseases of children, was established in 1860, in the New York Medical College and given to Dr. Jacobi. As late as ten years ago but little stress was laid on this branch of instruction; no examinations being required, students neglected it entirely. At present the change is remarkable. A study of schools gave the following result: in 64, there is a special chair; in 43, the chair is combined with some other department, but not as a minor subject; and in three there is a lectureship. In 89 per cent of these schools there is required a final examination by the Professor of Pediatrics, and in most of them this ranks with all other examinations.

Concerning the future needs of Pediatrics. the author pleads that the recognition of its importance become universal; that more time be allotted and more clinical material be provided by the colleges; and that no attempt be made to dissociate it from the main branches. We, who are interested in this great branch of medical science, should so study it, practice it, write of it. teach it, work for it, that we may fit ourselves and others to aid in the best way the most helpless and defenceless, the most attractive, the most appealing of our patients—the children.

INANITION FEVER IN THE NEW-BORN.

It is well to remember that in the first few days of life, solely from the lack of a proper and sufficient supply of nourishment, an infant may suffer from extreme restlessness, undue loss of weight and high temperature, and that death may result from this condition alone. Under these circumstances, in our search for some point of infection, we are apt to over-look the true condition of affairs. Inanition fever should be suspected when the mother or nurse mentions the fact that the child seems to be excessively thirsty, and sucks vigorously at everything and anything; or when it is very restless and cries constantly. The treatment is simple and satisfactory, consisting in artificial feeding (if the mother's milk is not prompt to appear), and in the giving of abundance of water at frequent intervals, an ounce every hour or two. In every case where an infant's temperature reaches 101 degrees F., water should be given regularly. Attention was first called to this fact by McLane of New York, and emphasized by Holt.

In the Journal of the Americal Medical Association, November 5, 1898, C. H. Hughes of St. Louis, has a running abstract of the progress made in neurology. It touches briefly upon all the subjects, and is worthy of consideration.

Neurology and Psychiatry.

UNDER THE CHARGE OF
R. O. BEARD, M. D., W. A. JONES, M. D.

The recently published works on nervous diseases give evidence of the advances made in neurology. All of them deal with the latter theories and advances in histology and pathology. All have accepted the neuron theory, or have at least given it space. The neuron, as understood at present, is a nerve unit, and is made up of a nerve cell and its terminal nerve fiber, or axis cylinder process. The central or motor neuron, practically originates in the cortex, and terminates in the brush-like extremity in the medulla or gray matter of the spinal cord. From this point the peripheral neuron begins, passes out from the cord and terminates in the muscle.

The sensory neuron begins in the periphery, and eventually terminates, with several interruptions, in the cortex of the brain. It is also believed that the terminal arborization around a nerve cell is not in direct contact with the adjoining cell, but that the processes approach and recede according to the conditions of health or disease.

Books.—Dana's well known work has gone through several editions, and has been revised and rewritten, many new chapters and illustrations have been added, to conform to the later advances and theories. The chapters on Anatomy and Physiology are illustrated in such a manner as to make the architecture readily understood. Dana writes in a clear, concise and condensed style. His views are practical and full of common sense.

Dercum's work, by himself and other eminent American authors, covers the ground very exhausively. It is profusely illustrated and written from a clinical standpoint, thus making it a very ready and convenient reference book.

Mills has an admirable work, just published, written in his well known style. It covers the general field of examination methods, symptomatology, anatomy and pathology. It deals with subjects such as disease of the sinuses, encephalitis, abscesses, and other inflammatory conditions; while his chapters on localization are clearly and exhaustively presented. The volume covers only the diseases of the brain; the type is large, the composition interesting and readable; it also contains compiled tables and formulæ.

Among the papers presented, is one by Andrew J. McCosh, in the American Journal of Medical Sciences for May, 1898, on the Surgical Treatment of Epilepsy.

He discusses operations for tumors, and believes, from a study of statistics, that the mortality for operations would reach at least seventy-five per cent. In cases of epilepsy no report of an operation inside of one year's period of freedom, and better, three years, should be accepted as conclusive, but the danger to life is comparatively slight, probably not more than five or six per cent. The difficulties and uncertainties in operations for epilepsy render the operations often unjustifiable as well as unnecessary, and among the prominent reasons why we cannot promise benefit from the operation, are, first, the uncertainty of diagnosis; second, the inaccessibility of certain portions of the brain; third, the character of the lesion; fourth, the post-operative lesions; fifth, the damage which has already been done to the neighboring cerebral structures by the lesion for which the operation is performed.

The final result, in fourteen cases operated by him, one year or longer having expired since the operation, and also since the last manifestation of cerebral disturbance, is as follows:

Cured, three; improved, five; unimproved, four; unknown, two; died, none; total, fourteen. Twenty-five per cent cured.

Wharton Sinklar, in a paper read before the American Neurological Society in 1898, on Long Remissions in Epilepsy, and Their Bearing on Prognosis, discusses the curability of the disease and what constitutes a cure. He quotes from several authorities, and shows that remissions may endure for from two to twenty-nine years; and is forced to the conclusion that it is not justifiable to consider any case of epilepsy cured, no matter how great has been the interval of freedom from attacks, and appearance of normal health.

Notwithstanding this unfavorable conclusion, the study of cases brings out a fact which is satisfactory; for it shows that remissions of many years duration may occur, during which the patient is in normal health and is able to pursue his ordinary occupation, as if he had never suffered from epilepsy.

A discussion by members of the Association, showed that the majority agreed with the author's statement; that a very small percentage was practically cured.

Doctor Græme Hammond believed that when patients had long intervals of freedom, and then had a recurrence of the disease, such should be considered as examples of cure, with epilepsy developed anew.

Spratling, in a paper in which he discusses Epilepsy and Digestion, says that in over a hundred cases, taken haphazard, not one was found in a normal nutritive condition. Forty per cent. of the stomachs were dilated; and ninety per cent. with alimentary tracts more or less catarrhal. He believes if the states could regulate the art and science of cooking, with the same care that they regulate the practice of medicine, epilepsy would, after a few generations, cease to be the bane of civilization, and would become a clinical curiosity.

Dr. Charles Phelps, in an article read before the Society of the Alumni of Bellevue Hospital, (New York Medical Journal) gives the history of a case of cerebral abscess of unusual ori-

gin, in which he believes that an epidural abscess was forced through the minute opening in a bi-parietal suture, to form an epicranial abscess, involving the mid portion of most of the cerebral hemisphere.

Krauss, of Buffalo (Philadelphia Medical Journal), reaches the following conclusions concerning optic neuritis from brain tumor:

First. Optic Neuritis is present in about ninety per cent. of all cases of brain tumor.

Second. It is more often present in cerebral, than in cerebellar cases.

Third. The location of the tumor exerts little influence over the appearance of the papillitis.

Fifth. Tumors of slow growth are less liable to be accompanied with optic neuritis, than those of rapid growth.

Sixth. It is probable that uni-lateral choked disc is indicative of disease in the hemisphere corresponding to the eye involved.

Seventh. It is doubtful whether increased intercranial pressure is alone responsible for the production of an optic neuritis in cases of brain tumor.

Geo. L. Walton (Amer. Journal of Med. Sciences, Sept., 1898) in a paper entitled: "Subarachnoid Serous Exudation Productive of Pressure Symptoms After Head Injuries," comes to the following conclusions:

First. A severe blow on the head may result, either directly or by contrecoup, in a local bruising, congestion, and swelling of the brain tissue, with serous exudation into the subarachnoid space, either with or without œdema of the brain substance.

Second. If this accumulation of fluids occurs over the motor centers, it may be imprisoned so as to cause focal pressure symptoms, simulating meningeal hemorrhage.

Third. This accumulation of fluid is not compensatory, but represents an ineffectual effort toward relief of tension, as shown by the swollen condition of the underlying brain substance when exposed by operation. The mechanism is probably analogous to if not identical with that of the so-called serous meningitis of Quincke.

Fourth. The lesion is self-limiting, the resulting paralysis disappearing in the course of a few days.

Fifth. This condition may be mistaken for middle meningeal or middle cerebral hemorrhage. The diagnosis is difficult and sometimes impossible. Factors aiding in the diagnosis are (a) an atypical course, (b) absence of steadily increasing coma, and (c) the appearance of sensitiveness to pain on manipulation of the head, even after the unconsciousness is so great that questions are not answered. The general symptoms (restlessness, stupor, headache, and moderate febrile movement) may be the same in both

Sixth. The mere presence of paralysis following a blow upon the head is not necessarily an indication for immediate operation, and in the absence of steadily deepening unconsciousness and of steady progression of other cerebral symptoms, it will be often wise to postpone surgical interference, though generally speaking an exploratory operation is always justified in case of focal paralysis following head injury.

Seventh. This lesion is to be particularly borne in mind in the case of children and young adults, and perhaps in alcoholic patients. In elderly patients the same set of symptoms points more decidedly toward hemorrhage.

The Insomnia of Melancholia, according to Weatherly (Bristol Medical Chirurgical Journal) is in a large number of cases best relieved by exercise of all kinds in the open air, at stated times during the day, short of the fatigue point. The determination of fatigue point he considers very important. Easily digested foods, an abundance of liquid food on retiring, and from ten to fifteen grains of phenacetine, repeated in one hour, if drugs are to be used. He mentions other drugs of more or less value but considers exercise, foods, etc., the best means of changing the cerebral circulation, and for nourishment of brain cells. He does not mention those cases in which absolute rest is demanded.

James Hendric Lloyd in the University Medical Magazine, records a case of muscular atrophy and peripheral nerve changes following typhoid in a man thirty years old, presenting the grade of a high type imbecile, but whose family history was negative. He believes that the partial arrest of development may have served as well as a hereditary defect to precipitate rapid degeneration of nerve and muscle tissue under the evil influence of typhoid poison.

MacLeod (British Medical Journal, 1897, and abstracted in the Journal of Mental and Nervous Diseases), records cases of morphine habit of long standing, cured by bromide poisoning. One in which the victim took by mistake eighteen drachms of bromide of soda in forty-eight hours. This induced a profound stupor, and later the bromide was continued at the rate of two drachms a day for three days. She recovered from the profound bromism in ten days, with the appetite for morphine entirely gone. He profited by this experience in a second case with the same result.

Among the newer drugs useful in nerve pains is one Kryofine, a modified phenacetine, which is superior to the older preparations. It is useful in neuralgic pains, idiopathic or acquired headache, and in the minor forms of insomnia. It is particularly valuable as an anti-pyretic. The dose is from four to eight grains, and may be repeated in two to four hours.

Another drug, Pyramidom, anti-pyrin derivative, is valuable in headache of undetermined origin, especially when occurring during convalescence from psychoses. It is also useful in headaches of alcoholics and acute articular rheumatism. The dose is from five to eight grains, and may be repeated three times in twenty-four hours.

W. A. J.

Eye, Ear, Nose and Throat.

UNDER THE CHARGE OF
J. D. SIMPSON, M. D.

A NEW TREATMENT FOR TRACHOMA.

Preliminary Report: Dr. George F. Keiper advocate (The Ophthalmic Record, Oct., 1898) interstitial electrolysis, or as it is sometimes called metallic electrolysis, in all forms of trachoma in which the copper sulphate pencil is usually applicable. "A four per cent. solution of cocaine is dropped into the eye, and repeated in three minutes. After waiting five minutes the lids are sufficiently anethetized for work. The patient is then given the dispersing electrode connected to the negative pole of the battery, and may either hold it in his hands or may hold it on the back of his neck. The surgeon stands behind the patient, everts the affected lids, and with a blunt pointed copper electrode rubs gently the conjunctival surface of the lid. The milliamperemeter during this procedure should not register over five milliamperes. Three milliamperes is generally all that the majority of patients can stand. The seance lasts for five minutes. After treatment patients complain of some smarting and stinging, due, no doubt, to the deposit of the oxychloride of copper within the substance of the lid beyond the reach of the cocaine."

ON THE USE OF FORMALDEHYDE IN ATROPHIC RHINITIS.

Dr. G. L. Richards (Laryngoscope, May, 1898) uses formaldehyde as follows: After removal of all crusts and debris with a weak alkaline solution, by means of a syringe and cotton application, both nostrils are well washed out with a solution of formaldehyde containing about five or ten drops of the forty per cent solution to eight ounces of warm water. On account of its irritating properties, it is well to previously spray the passages with a solution of cocaine.

It is claimed under its use crusts diminish in number and all unpleasant odors cease.

THE TREATMENT OF ENTROPION OF THE LOWER LID WITH CAUSTIC POTASH.

Dr. Samuel Theobald advocates (American Jouranl of Ophthalmology, Oct., 1898) the use of caustic potash in the treatment of senile entropion of the lower lid from relaxation of the lid tissue. "In applying the caustic our aim should be to produce an eschar 3 to 4 mm. in width, parallel with the lid margin and extending the whole length of the tarsus. At no point should the action of the caustic be allowed to approach nearer the margin of the lid than 1½ to 2 mm., and as the destruction of tissue tends to spread considerably beyond the actual point of contact of the crayon, the line of application of the latter should be about 4 mm. from the ciliary border. Along this line, the lid meantime being everted and kept well upon the stretch, the crayon should be drawn back and forth several times, until the epithelium is destroyed and the tissues beneath begin to assume a brownish color. Holding the lid carefully so that it shall not become inverted, the action of the caustic is allowed to extend as far as may seem desirable, when it should be arrested quickly by the application of an acid, vinegar diluted with an equal quantity of water answers well for this purpose, or acetic acid diluted with water to about the same strength may be used, if more convenient. Within a few minutes the eschar begins to contract and when the lid is released it is usually found that the tendency to entropion has already been overcome. A simple dressing may be applied if thought desirable; but it seems to be a work of supererogation, as the cases always do well without this precaution."

CLINICAL MICROSCOPY.

UNDER THE CHARGE OF
J. FRANK CORBETT, M. D., G. D. HEAD, M. D.

WASHED OUT RED BLOOD CORPUSCLES IN THE URINE AS AN AID IN THE DIAGNOSIS OF RENAL CALCULUS.

Blood occurs in the urine in a large variety of pathological conditions, which need not at this time be enumerated. Its appearance depends largely upon the source in the urinary tract from which the hemorrhage originates. If the blood appears in clots in the urine the hemorrhage is usually from the lower urinary tract, the bladder or urethra being involved. Although occasionally blood coming from the ureter will coagulate in long cylindrical clots, making a more or less perfect cast of the ureter itself.

On the other hand the blood may appear unclotted in the urine in which case if the hemorrhage originates in the kidney or the pelvis of the kidney, the urine will present a dark smoky appearance.

But blood may occur in urine and give to the naked eye no evidence of its presence. Such a condition is not infrequent in the hemorrhage produced by a stone in the pelvis of the kidney, or the ureter, and failure to examine the urine microscopically under such conditions will often rob the clinician of a valuable aid in diagnosis. Microscopically studied, blood exhibits itself in the urine:

(a) As the normal red blood corpuscle.
(b) As the crenated red blood corpuscle.
(c) As the washed out red blood corpuscle, or the so-called "Shadow corpuscle."

Particular interest centers about this third form of the washed out red blood corpuscle because it is present in freshly excreted urine only

when the hemorrhage is high up in the urinary tract.

A washed out red blood corpuscle is one whose hæmoglobin has been nearly or quite dissolved out. It appears under the microscope as a pale yellow, or colorless ring with a very delicate but distinct border. It is somewhat smaller than a normal red blood corpuscle, and frequently exhibits little irregularities in its contour. Sometimes so completely has the coloring matter been removed that only the faintest shadow of the cell remains, and the corpuscle is easily overlooked. To produce this appearance in red blood corpuscles artificially one needs only to run a little dilute acetic acid solution under the cover glass in a mount of normal blood, when these pale rings will make their appearance. They are usually present in small numbers in the urine. They never form a sediment visible to the naked eye, and are only seen on microscopical examination. They are a common constituent of blood casts some of which they completely fill.

If normal red blood corpuscles are allowed to stand in urine for 48 hours or more, many of them will become washed out, a fact which should not be forgotten in examining old specimens of urine.

Washed out red blood corpuscles occur in a number of pathological conditions. Von Jaksch names acute nephritis, acute congestion of the kidney, and miliary tuberculosis of the kidney, or its pelvis. Simon Purdy, Diaber, and Peyer speak of their existence, but do not specify the particular diseases. In none of these authorities is there any mention of their presence in the urine passed during or after an attack of pain caused by renal calculus. That they are many times present in this condition is certain, and their presence is of diagnostic value in excluding the causes of acute abdominal pain, such as appendicitis, gall stone, ulcer of the stomach, intestinal colic, floating kidney, and gastralgia. The urine passed during and for some days following the attack should be examined fresh. Care should be taken not to confound the spores of certain fungi with washed out red blood corpuscles; they are somewhat alike in size, but the spores have more distinct borders and usually contain yellow colored granules in their interior.

The following cases of renal calculus are reported in which washed out red blood corpuscles were found in the urine passed subsequent to or during an attack of Renal Calculus:

Case 1. Mr. K., young man, 24 years of age, well nourished, comes for an acute attack of pain in right upper abdomen radiating around to the right shoulder blade. Pain is severe. It came on suddenly and is paroxysmal. Requires morphine to relieve it. Vomited during the attack. No fever. Pulse 90. No palpable swelling. No point of extreme tenderness. Never had a previous attack. Clinical diagnosis: Renal Calculus. Examination of urine: Sp. gr. 1026, high color, no alb., no sugar, urea 4 per cent., uric acid increased. On microscopical examination there is seen in the field a moderate number of pale colorless rings (washed out red blood corpuscles), also a few feebly colored red blood corpuscles. Subsequent examination failed to reveal any such bodies. One month later a second attack, similar to the first. Urine, Sp. gr. 1028, high color, no alb., no sugar, urea 3 per cent. Microscopical examination revealed a few delicate, ring shaped bodies (washed out red blood corpuscles). One subsequent examination failed to show any such bodies. One day later patient brought in a small phosphatic stone passed by urethra.

Case 2. Mrs. R. Large, fleshy woman, 35 years old. Called in early morning. Patient had been seized in the night with a severe attack of acute pain in the upper left abdomen, shooting down toward the bladder. Hot cloths did not relieve it. She rolled around on the bed and cried out; the pain was so severe. Patient had such an attack two years before. Normal temperature, pulse 120. Patient tried to vomit during the attack. Some tenderness on pressure over left lumber region. One half grain of morphine relieved her. Clinical diagnosis, Renal Calculus. Urine, Sp. gr. 1028, high color, a trace of albumen, no sugar. Microscopical examination reveals a number of pale, colorless, delicate bordered rings (washed out red blood corpuscles), no casts, a few leucocytes. The woman recovered the following day. An examination of the urine one day later revealed no such bodies.

Case 3. Mrs. B. Patient of Dr. Hunter. Seized with a severe attack of pain in abdomen. Pain paroxysmal in character. Some nausea. No fever. Clinical diagnosis, Renal Calculus. Microscopical examination of urine revealed from five to ten red blood corpuscles in the field; some of them washed out. No casts. A few triple phosphate crystals. Specimen taken two days later showed no such bodies. G. D. H.

THE CLINICAL VALUE OF THE WIDAL TEST.

The Widal test has now been on trial about two years. At first everything was expected from this new method of diagnosing a hitherto complex and puzzling form of disease. During these two years much has been written showing both the efficiency and the deficiencies of the test. The widely differing opinions are due, in part at least, to conditions outside of the mere technic of making the test. In private practice a case is often pronounced typhoid, which under the close examination and continued observation of the hospital would be shown as something else. Often a case is seen but once, and examination of blood made, and the correctness of the examination judged by the clinical evidence gathered on a single visit; and in a climate where typhoid prevails we can rarely exclude a previous typhoid infection, unless a very careful history be taken. On the other hand, but few private

patients will permit the repeated examinations we can make in hospital work. So, if we must judge of the test, let us at least found our opinion on hospital cases where every possible error of clinical diagnosis is eliminated.

One of the most valued series of observations has been made by Dr. W. G. Thompson, who has gathered data from over five hundred cases of enteric fever treated in hospitals. In an article published in the British Medical Journal he sums up his observations as follows:

"1. While the test is positive in the large majority of cases of enteric fever, and negative in the greater number of other diseases, there is a margin of error of eleven to twelve per cent on each side of what might be called the normal line, between cases in which the test fails where it ought to succeed, and succeeds where it ought to fail, in order to make it of real clinical value.

"2. This total of twenty-three per cent of possible error unfortunately includes just those cases in which there is the greater doubt upon the purely clinical side.

"3. As a genuine diagnostic aid, the test has about the value of the diazoreaction in typhoid urine or the study of leucocytosis in pneumonia; that is, it is confirmatory in connection with appropriate symptoms, but misleading if positive reliance be placed upon it.

"4. The fact that an expert bacteriologist is required to make the test is offset by the ease of transportation of specimens of dried blood, which long retain the power of reaction; and it is greatly to be hoped that further possible improvements in technic may place this most ingenious test upon a firmer practical basis than can at present be claimed for it."

Dr. Thompson further states, that in four cases reaction has first appeared on the first day; in thirteen on the second; in twelve on the third; in twenty-five on the fourth; in twenty on the fifth; in eight on the sixth; in twenty-two on the seventh; in seven on the eighth; in three on the ninth day; in eleven on the tenth; in three on the fourteenth; in one on the twenty-first; in one on the twenty-first, and in one on the thirtieth day, and one not positive until the forty-third day.

On the other hand, Blackburn, in The Medical News, says: "In eighty cases of typhoid, as established by the clinical diagnosis, the test was positive in all except two. In one case of catarrhal fever up to the ninth day the test was negative, on the eleventh doubtful, and positive on the fourteenth. In one case of uremia positive reactions were secured in a patient who had typhoid five years before." Dr. Blackburn concludes that it is a good corroborative test; that in doubtful cases, early in the disease, it does not assist in the diagnosis, in severe cases is positive early, yet in a few typical cases it is negative.

In concluding, let me present a point of interest brought to light in a paper by Dr. J. P. Barker in New York Medical Journal. He says: "A point that somewhat impairs the reliability of the serum test is the fact that it sometimes disappears in the course of the disease." He has collected data from eleven mild cases in which this has occurred. He concludes by comparing it with the diazo reaction in the following terms:

"The serum test has proved the more reliable, it having appeared in every case but one. So far as my experience goes, it has appeared in no other disease.

"The diazo reaction has the advantage of having appeared earlier in the disease in nearly twice the number of cases. In almost every case in which the serum reaction appeared first the diazo reaction was present on the following day, while in many cases the serum reaction was absent for several days after the diazo reaction was found.

"Ehrlich's test is by far the better for the general practitioner. No expensive laboratory apparatus is required. It is easily and quickly made, and with a little experience the reaction can be detected in nearly every case. The diagnosis should always be confirmed by the presence of the serum reaction." J. F. C.

PREMATURE INFANTS.

Prior to the 28th week an infant is scarcely capable of extra-uterine existence. Even at 36 weeks it has a feeble hold on life, and easily dies unless carefully looked after. In the case of premature infants the following points should be considered:

1. Maintainance of an environment-temperature approaching 100 degrees F. This is best obtained by an incubator; crudely, by a box with cotton batting and hot bottles. Bathing to be absolutely forbidden for some time.
2. Avoidance of noise.
3. Avoidance of light.
4. Only such handling as is absolutely essential for cleansing and feeding.
5. Food in proper quantity and quality. It is well to begin with one drachm of modified milk, and increase to the point where the child is quiet and sleeps peacefully. The intervals are best hourly at first, to be lengthened as conditions indicate. (T. M. Rotch, Text-book on Pediatrics.)

LONGEVITY IN EUROPE.

Of European nations the Norwegian and Swedish are longest lived, the Spaniards the shortest. The Bulleten Generales de Therapeutique gives the average duration of life as follows:

Sweden and Norway, 50 years.
England, 45 years and 3 months.
Belgium, 44 years and 11 months.
Switzerland, 44 years and 4 months.
France, 43 years and 6 months.
Austria, 39 years and 8 months.
Prussia and Italy, 39 years.
Bavaria, 36 years.
Spain, 32 years and 4 months.

Hospital Clinics.

ASBURY METHODIST HOSPITAL

Surgical Clinic by J. W. MACDONALD, F. R. C. S.

FRACTURE OF THE PELVIC BONES WITH RUPTURE OF THE BLADDER.

The first case to come before us this morning is that of J. L., aged 32 years, who was run over by a heavy waggon and brought to this hospital by the police. Unfortunately no definite history can be obtained of the manner in which his injuries were received. All we can learn is that his horses ran away and in his efforts to control them he was thrown to the ground, and the heavy wheels passed over his body.

On examination, a deep lacerated wound was found in the perineum a little to the right of the anus, and extending to a depth of three or four inches. Exploring this wound with the finger, I found it did not communicate with the pelvic bones, nor did it extend to the bladder, but passed upward and outward in front of the rectum towards the right iliac fossa. There was extensive fracture of the left ascending ramus of the schium and separation of the symphisis pubis. This fracture could not be determined by digital examination of the wound for the shattered bones were on the left while the wound was on the right side; nor could the displaced fragments be recognized except when the patient was placed on his back with the thighs flexed upon the body. He was unable to pass urine and his whole complaint was that he had urgent desire to micturate but had not power to do so.

When the pelvis is subjected to great violence we may expect to find one or more of the following injuries:

Fracture of the pelvic bones.
Separation of the synphisis pubis.
Rupture of the urethra.
Rupture of the bladder.
Injuries of the abdominal viscera.

1st. Is there fracture of the pelvic bones? When the patient is placed in the lithotomy position a very sharp fragment of bone can be felt almost piercing the skin. It is the upper ramus of the pubis. This is a common position for fracture of the pubic bone. Sometimes the pelvis gives way posteriorly in the ilium behind the acetabulum, or at the sacrum or at the sacro-iliac synchrondrosis. In this case the displacement is evident to the touch and to the eye; but sometimes it is difficult to detect the fracture and the only evidence is pain on direct pressure, or when the wing of the ilium is moved.

2nd. Is there separation of the symphysis? There is, for as I pass my finger behind the symphysis, the separation can be distinctly felt.

3rd. Is there rupture of the urethra? One of the most prominent signs of rupture of the urethra is hemorrhage from the meatus, but in the presenct case this sign is wanting. A careful examination of the perineal wound shows that it does not involve the urethra, but passes to the right. The patient complains of a constant desire to micturate, and is evidently making fruitless efforts in that direction. If the wound communicated with the urethra, we would probably be able to detect urine dribbling from the wound.

4th. Is the bladder ruptured? The patient states that he had drunk several glasses of beer, and it is his opinion that the bladder was quite full at the time of the accident. This is important, for a full bladder is much more liable to rupture than an empty one. So that in this case the bladder has been subjected to danger, first, by the fact of its distention when the wheel passed over it, and, secondly, by its proximity to the fractured bones. I pass a catheter into the bladder and a small quantity of urine escapes with blood. This looks very suspicious, for the urine should be clear, and there should be more of it. To make the point more certain, we shall proceed to measure the bladder. I inject through the catheter eight ounces of boric acid solution, but only three ounces of the fluid returns. This is proof positive that the bladder is ruptured. Now, rupture of the bladder is of two kinds, intraperitoneal and extraperitoneal. In the former variety the urine escapes into the peritoneal cavity, soon producing profound shock, and unless promptly treated, the patient will die in from three to seven days. Sometimes we find that the catheter passes through the rent in the bladder and can be pushed far beyond the confines of the viscus; but this is not always the case, for the point may impinge against an unbroken portion of the bladder.

But while we are making this examination, another important symptom is beginning to appear, namely, a swelling in the prevesical space and in the scrotum. This is due to extravasation of urine, and is one of the most serious conditions with which we can be confronted. Extravasated urine produces inflammation and gangrene. When it comes in contact with cellular tissue, the latter sloughs and breaks down, the skin is destroyed, exposing large areas of fetid, black tissue, saturated with urine and pus, and even the penis and testicles may drop off.

The presence of extravasation, however, is evidence that the rupture is extraperitoneal, the urine does not escape into the peritoneal cavity, but finds its way in front of the neck of the bladder and into the connective tissue of the perineum and scrotum.

Diagnosis. Our diagnosis of the case is fracture of the upper ramus of the pubis, separation of the pubic symphysis, a deep lacerated wound of the perineum and a wound of the bladder produced by the fractured bones. The bladder wound is extraperitoneal and is attended with extravasation of urine.

Treatment. For the fractured bones all we can do is to immobolize the pelvis by a firm, broad band of strong material. If there were no complications, a plaster cast would be a good appliance. The ruptured bladder requires prompt attention. Drainage of the extravasated urine must be secured at any cost. As the prevesical space bulges out so prominently, I make a free opening there, exposing the bladder, and examining it carefully in the hope of finding and closing the rupture. No wound in the viscus can be found by this examination. The bulging in the perineum is still present, and the extravasated urine is causing havoc among the tissues of that region. I pass a grooved staff into the bladder, and while an assistant holds the scrotum forward I make an incision in the raphe between the scrotum and the anus and divide the parts until the membranous portion of the urethra is exposed. The point of the knife is then made to enter the groove in the staff and the urethrua is divided back for about three quarters of an inch. Through this opening I pass my finger and by a rotary motion it reaches the bladder. Behind the prostate I feel a laceration in the neck of the bladder to the left side. A large rubber tube is inserted and held in place by stitching it to the skin. The prevesical wound is packed with iodoform gauze, a copious absorbent dressing is applied to the perineum, and the patient is sent back to bed.

ST. BARNABAS HOSPITAL.

Clinic by KNUT HOEGH, M. D.

FEMORAL HERNIA.

Mrs. T. H., age 35, married, no children. Has for two or three years been subject to more or less constant pain in the left half of abdomen; sometimes situated more in the inguinal region, sometimes felt as high up as left hypochondriac region; of a cutting nature; apparently not influenced by taking food, nor by emptiness of the stomach. Usually better in the recumbent position, and not generally felt during the night. No symptoms from the system of respiration; occasional palpitations; digestive system works well upon the whole, but there is a tendency to constipation; no morbid symptoms from the urinary or generative organs. Sleep is good; no cramps, spasms, anasthesia, paresthesis or symptoms of disorder from vaso-mortor nerves. She gives no further history of illness; has been able to perform her rather easy domestic duties until lately, when the pains have interfered to some extent.

Upon examination she is found to be somewhat pale; otherwise well nourished; lungs, heart and abdominal vi scera exhibit nothing abnormal. Urine clear, acid, normal color and odor; mucous sediment on cooling, no albumen; spec. gr. 1023. Uterus and pelvic organs normal.

In the left groin is felt a not prominent but distinct elastic fullness, extending from the saphenous opening upwards to slightly above Poupart's ligament; this swelling is of the normal color of skin, soft, not fluctuating, painless when touched or pressed; it can be moved downwards but not made to disappear; it receives no impact on coughing; seems more firmly fixed below than above. Upon percussion it emits a flat sound. The patient has known of its existence for some weeks, when she discovered it in feeling for a cause for the pains that often seemed to start from it.

It was so ill defined, that it might have been overlooked in a very fleshy subject; its presence was made more certain by comparison with the right (sound) side. Its consistency was very characteristic of fat, soft and elastic; its origin from the saphenous opening made it highly probable that it was a fatty development of an irreducible femoral hernia, consisting entirely of omentum. It did not have the consistency of glands, nor the fluctuation of abscess. The pains could without difficulty be explained as traction symptoms. The diagnosis was then made of an irreducible omental hernia through the crural canal.

A crural or femoral hernia is in many ways very different from an inguinal one. It rarely is of large size; has the consistency of a lipoma, but is less distinctly lobulated; can not usually be reduced owing to adhesions, partly outside of the saphenous opening, partly at the inner margin of the crural canal. It is at times very difficult of diagnosis, especially in fat subjects. Three or four years ago I had for some months a patient under observation; he had suffered from several attacks of abdominal pain on the right side; he was a traveling salesman, and had on several occasions been laid up away from home where he had to go to bed when the attacks came on. They were of short duration, consisted almost entirely of severe colics, rarely connected with vomiting; there had never been any distinct swelling in the region of the appendix. I could not concur in the idea advanced by some of the many doctors who had treated him, that he suffered from recurring or chronic appendicitis; there was no tenderness or swelling about the head of the colon. The patient was very fleshy, and it was only after repeated examinations that I found a certain fullness in the region of the saphenous opening for confirmation of my diagnosis of an omental crural hernia. I sent him to a very skillful and experienced colleague, from whom he came back with the opinion that the diagnosis was uncertain. I received the impression that my diagnosis was not looked upon with much favor. I kept him under observation for some time, and became convinced that I was right. I operated, found the conditions as I had anticipated, and the patient, whom I see several times every year, has remained perfectly well. It is worthy of note, that he has been partly relieved

of his obesity since the operation. This case illustrates well the difficulties of diagnosis.

A characteristic feature of these herniæ is their pain. As they are irreducible on account of the adhesions they are not benefited, but on the contrary made worse by trusses.

Another characteristic feature in these cases is that they are often found in persons with strong and muscular abdominal walls. Inguinal hernia may also develop in robust individuals, but then they are people who have to perform very hard labor. Not so in the sufferers from crural hernia. Our present patient has never been subject to hard labor; has not had any children.

Strangulation is much more common in femoral hernia than in inguinal, and rapid gangrene of the bowel is apt to set in, owing to the narrowness of the crural canal and the rigidity of its walls.

When we cut down upon such a hernia, we usually find numerous adhesions, mostly omentum; it is to be noted that they are not only found outside the cribriform fascia, but also inside of it. The hernia has, in fact, an hour glass form, the constricted part corresponding to the saphenous opening; sometimes it is possible to reduce the part that is outside this opening, while the part between it and the abdomen is yet outside the crural canal; such a reduction is, of course, useless. Complete reduction may be difficult and require slitting of the crural canal; this is rather deep dissection, but in careful hands not dangerous; the femoral vessels are on the outside and ought to be in no danger. The operation is decidedly less complicated than that of an inguinal hernia, when the presence of the cord or of the testicle may confuse.. The radical cure must upon all these considerations be said to be more urgently called for than in other varieties of rupture, and its results are certainly very satisfactory. It has, however, its peculiar difficulties, and they are mainly owing to the irregularities of the sac. In some places it may be very thick, lined with fat, and difficult to distinguish from the contained omentum; in other places it is so very thin that it is hard to separate it from the surrounding subcutaneous fat and cellular tissue. The way to find it is to go down to it at the saphenous opening and dissect from this point; you follow the anterior surface, and the part outside the saphenous opening is soon dissected out. The sac is opened, where you are sure there is no bowel in the way, and the finger is introduced. You oberve whether there is only omentum or a loop of intestines; further, after you have brought your finger into the abdomen you feel for adhesions to the neck of the ring. They must be carefully loosened, and the omentum drawn down as far as possible. The finger can usually not be introduced before the crural canal has been incised, upwards, and slightly inwards; in cutting always cut from outwards, away from the crural vessels. In the dissection the knife or scisors should be used exclusively, every bleeding vessel immediately secured, so that you operate under the immediate guidance of the eye. Sponge carefully so that you see the tissues clearly; remember that the vein is outside of the artery, and may be difficult to recognize. Do not stop at your operation at the saphenous opening; that is an easy operation, but useless to your patient.

After you have drawn down the omentum you transfix it with a double stout catgut ligatur, that is tied so that the loops cross each other; the stump is cut, cauterized with the Paquelin cautery, or pure carbolic acid, and let loose. If it has been thoroughly loosened it will retract into the abdominal cavity. If intestines form part of the rupture they are pushed in. Then comes ligature of the sac with catgut in the same way as for the omental stump. To close the crural canal you use two sutures of catgut, carried from above downwards, not from side to side, and by all means not from the inside outwards from danger of puncturing the vein. After these sutures are made it remains to close the wound; however before you do so, you look for glands that you may have severed in your incision, that usually is made from above and outwads, downward and inwards. Glands should be removed as they may complicate the healing process. In suturing the skin it is well to leave a few catgut strands in the wound to act as drainage, and let them come out at the upper opening.

The operation was performed in this manner; the sac contained omentum and several cysts from vacuolation in the fatty tissue. There were abundant adhesions outside the cribriform fascia, but none inside. The great vessels were easily detected and avoided, but veins and one artery from the pubic region (the superficial external pudic) had to be tied and cut. After the suturing was completed a very voluminous dressing was applied from the lower third of the thigh to the umbilicus.

Trusses or bandages are not used after this operation, that usually produces a complete cure without recurrence of the hernia.

A SPARTAN MOTHER.

At a meeting of the parents and friends of the 13th Minnesota Volunteers now in service at Manilla, an old lady with a strong German accent addressed the audience in these words: "I do not wish my boy to come home until the government is through with him, and if he suffers from hunger it is no more than I myself have done. I have often lived on bread and water, and sometimes I did not have enough bread. I weighed 119 pounds and I never used a doctor and now I weigh 221 pounds."

The percentage of blind persons, 148 to every 100,000 inhabitants, in Spain, is greater than in any other nation of western Europe.

778

THE MEDICAL DIAL

M. P. L. Rec'd OCT 12 190

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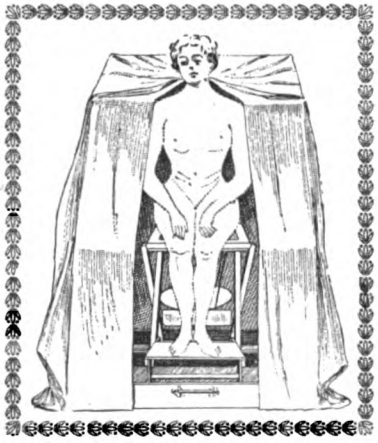

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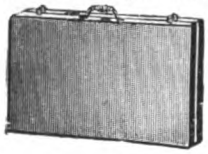

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THE MEDICAL DIAL

A Monthly Record of Medicine and Surgery.

Vol. I. MINNEAPOLIS, JANUARY, 1899. No. 2.

Original Articles.

MODERN IDEAS OF INFLAMMATION.

KNUT G. HOEGH, M. D.,
Professor of the Principles of Surgery and of Clinical

they meet numerous and active lymphocytes that have originated there; the enlargement of the lymph glands under these circumstances, which is the universal rule, indicates sufficiently the new formation of the defensive elements. If also these glands prove insufficient to destroy or at least retain and incapsulate the bacteria; the same process is continued into the next series of lymph vessels and glands by the process we call infection by continuity; this constitutes the second line of defense.

But it may happen that the infective agents pass by the lymphatics and either through the broken down capillaries or greater vessels enter the general circulation. The organization is also here able to offer powerful resistance, which constitutes the third line of defense.

We have seen that in the mollusk is found an undetermined gland endowed with strong phagocytic properties. This is in a way to be considered as the prototype of the spleen, which in the higher animals by its increase in volume indicates its participation in the reaction of the organism against the bacteria or their toxines; in the higher animals this phagocytic effect is not limited to the spleen; the bone marrow and the endothelia of the bloodvessels assist in the process: partly by direct local phagocytosis, and

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[illegible] line of defense, we must indicate the body juices themselves. In normal blood and lymph are found protective substances that have bactericide properties. These substances, that are called alexines are soluble albuminates, probably derived from leucocytes; they are easily destroyed when brought in contact with bacterial toxines, and on the other hand act as antidotes against them in neutralizing these chemical compounds. Further more, the excretions of the body, the urine, the feces, the perspiration, as well as the bile, the saliva, and the milk, absorb and expel from the organism toxines, which can be demonstrated in them by chemical analysis.

These processes are of course of great importance in the battle against all kinds of bacterial invasion, but they are further reinforced by a more remarkable process. When an individual becomes infected by a bacterial poison, there is produced in its blood certain substances which we call anti-toxines, and which have a

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MODERN IDEAS OF INFLAMMATION.

KNUT G. HOEGH, M. D.,

Professor of the Principles of Surgery and of Clinical Surgery in Hamline Unive.sity.

(*Continued from page 9.*)

A description of inflammation that only considers the local process is defective, for the organism reacts in several ways, and in several localities against the onset of the bacteria; it has like a fortified castle several lines of defense.

Have the bacteria prevailed at the point of infection, and have they broken through the first line of the surrounding granulation wall, they may spread through the lymphatics to the glands. There follows then a lymphangitis or a lymphadenitis; the battle is then renewed, and usually under these circumstances, successfully for the organism. For in the lymph vessels and the glands the conditions are very much the same as in the original point of infection; when the bacteria reach the lymph sinus in the glands they meet numerous and active lymphocytes that have originated there; the enlargement of the lymph glands under these circumstances, which is the universal rule, indicates sufficiently the new formation of the defensive elements. If also these glands prove insufficient to destroy or at least retain and incapsulate the bacteria; the same process is continued into the next series of lymph vessels and glands by the process we call infection by continuity; this constitutes the second line of defense.

But it may happen that the infective agents pass by the lymphatics and either through the broken down capillaries or greater vessels enter the general circulation. The organization is also here able to offer powerful resistance, which constitutes the third line of defense.

We have seen that in the mollusk is found an undetermined gland endowed with strong phagocytic properties. This is in a way to be considered as the prototype of the spleen, which in the higher animals by its increase in volume indicates its participation in the reaction of the organism against the bacteria or their toxines; in the higher animals this phagocytic effect is not limited to the spleen; the bone marrow and the endothelia of the bloodvessels assist in the process; partly by direct local phagocytosis, and partly by increased production of new leucocytosis, the so-called inflammatory hyperleucocytosis.

It has been experimentally proved that this hyperleucocytosis is the direct result of toxin resorption; in most diseases its presence is of good prognosis, it shows that the organism reacts; in some diseases—for instance pneumonia, its absence forebodes a speedily fatal result. In other diseases, however, it only shows an extensive toxin resorption, that in itself may prove fatal from its intensity, and in spite of the hyperleucocytosis; we see that in diptheria this very pronounced increase of leucocytes usually indicates a fatal toxinaemia.

But even this process is not the last effort of the organism to resist the bacteria and to neutralize their toxines; as perhaps the strongest line of defense, we must indicate the body juices themselves. In normal blood and lymph are found protective substances that have bactericide properties. These substances, that are called alexines are soluble albuminates, probably derived from leucocytes; they are easily destroyed when brought in contact with bacterial toxines, and on the other hand act as antidotes against them in neutralizing these chemical compounds. Further more, the excretions of the body, the urine, the feces, the perspiration, as well as the bile, the saliva, and the milk, absorb and expel from the organism toxines, which can be demonstrated in them by chemical analysis.

These processes are of course of great importance in the battle against all kinds of bacterial invasion, but they are further reinforced by a more remarkable process. When an individual becomes infected by a bacterial poison, there is produced in its blood certain substances which we call anti-toxines, and which have a

destructive influence upon the bacteria or their poisons. The manner in which these antidotes are produced is unknown; possibly some chemical reaction takes place between the bacterial toxines and the blood plasma; the result is that the organism becomes an unsuitable soil for the bacteria, or that it becomes able to resist the action of their poisons. This is the condition somewhat loosely called immunity, which may be temporary or permanent. If during infective diseases, bacteria could multiply indefinitely, and if there was no other limit to their growth than the exhaustion of the nutrient material, it is difficult to see, how anybody could ever recover from an infective disease, that has broken through the primary local reaction focus. If for instance, the local reaction against the pneumoncoccus is insufficient to neutralize the effects in the attatcked lobe of a lung, and the bacteria go on multiplying, they must certainly overwhelm the organism by their toxines, if no further defensive mechanism is put in action. The usual clinical picture of the disease seems to justify such an assumption. The patient lies in a very precarious condition, the condensation of the affectetd lobe of the lung shows no signs of resolution; the nervous system, the heart, the kidneys, are nearly exhausted. The patient is apparently in the greatest danger of death, and in fact in weak individuals it takes place with sufficient frequency; but in a majority of robust patients a sudden improvement appears, so that the patient at once passes from a most critical condition to one of convalescence.

This is supposed to be due to an anti-toxin in the blood. The same with nearly al the self limiting infective diseases. In several of them the experimental pathologists have been able to isolate the chemical substance; in some they have used the serums of infected animals, and have produced cures by injecting them in the patient's body. Behring's anti-toxine for diphtheria is an instance of the therapeutic value of this treatment; and there are many facts that seem to indicate that we in the future shall be able to cure infective diseases by similar measures.

Reports are already coming in of the cure of pneumonia, tetanus, and typhoid fever by this treatment; they are as yet few and scattering, as our technique is imperfect; but the way is indicated, and the day is perhaps not distant when the general treatment by this and similar methods will be as certain and effective, as the local or surgical treatment, which now enjoys such a prestige in the popular estimate.

It must also be remembered in reviewing the process of healing infections, that the bacteria themselves produce metabolic substances, that are detrimental to them; that the bacteria thus may be destroyed by their own products, just as human beings occasionally die from retention of their secretions in uremia and acetonemia, when the cutaneous perspiration is abolished, etc. This process can, however, not properly be considered as a link in the chain of the organic reactions, as the invaded organism takes no part in it. In considering the above enumerated facts, we are led to the conclusion already above indicated, that the organism possesses other means of resistance against infection than the mere local ones, and that however great the importance is that we ascribe to Metschnikoff's theory of phagocytosis, this alone does not comprise the whole truth.

As most of the inflammations that interest the physician result from infection with bacteria, it seems proper to consider this process somewhat in detail.

All bacteria that can produce disease are called pathogenic. They act in two different ways, and must, therefore, be separated in two different groups; one possesses the ability to enter the body and develop there; the other produces its poison outside of the body; under certain circumstances these poisons may be absorbed by the organism and interfere with its healthy functions. The first process is called infection, the second intoxication. We call the first group of bacteria, infective bacteria; and the second group saprophytes, that is, bacteria living on dead material. The infective bacteria do not act by their mechanical effects, but by their ability to secrete poisons; as an illustration we will name the anthrax bacteria, about which formerly the erroneous belief was current, that they acted mechanically by their mere presence, by depriving the organism of necessary material, for instance its oxygen; we know now that they produce their destructive effects by the preparation of poisons as a result of their metabolism. As a representative of the second group we will take the saprophytic bacteria that live in the intestinal canal: they live upon the dead contents of this canal, and are in health harmless: they are outside of the body, for the intestinal

canal may be considered as a tube that perforates the body, and is outside of it.

The products of these bacteria are not absorbed by the healthy intestinal canal, but are passed out of the body with the excrements. But if a loop of intestine is cut off from its normal blood supply by a constriction, or by being squeezed into a hernial opening, the intestinal wall loses its vitality and becomes permeable to the poisons secreted by the saprophytes and dissolved in the fluids contained in the diseased loop. These poisons may speedily overwhelm the organism that succumbs, often without fever, very much in the same way as an organism is killed by a fatal dose of morphine or digatilin.

The saprophytes or parasites live, not on the dead tissues of the body, but on the intestinal contents; a dead and foreign substance, that temporarily is enclosed within its walls.

It is evident that the anthrax bacillus produces its poisons by an endogenous process; that is, the poison is prepared within the infected organism, while the saprophytes produce their poison ektogenously, that is by a process that takes place outside the body. It is of importance to distinguish between these two mechanisms, as our porphylaxis and treatment must be different in the two cases. In the first case we must, as well as we can, prevent the entrance of bacteria and make the tissues unfit for their habitation. The process of making the organism unfit for the bacteria to live in, is called immunizing, and an animal that does not offer a bacterium a fit soil, is said to be immune against such a bacterium. The opposite of immune is susceptible or disposed. We know from experience that many individuals are immune against bacteria that are pathogenic for other individuals; we know that there are tissues that are immune, at the same time as other tissues in the same individual are susceptible. The gen-occus for instance, thrives on the young pavement epithelium of mucous membranes, but not on older epithelium, nor on epidermis. Old rats are immune against anthrax, young are susceptible. Most animals are immune against syphilis; it is doubtful if any animal but man is susceptible; adult men are immune against whooping-cough, children susceptible; dogs and chickens are immune against the tetanus bacillus, etc.

Immunity does not only vary with the animal species, but also with the age of the individual and with the condition of general nutrition, so that there may be a temporary disposition, or a temporary immunity, according to such conditions as hunger, exhaustion or cold. We can not only make an organism unfit to support a given bacterium; it is also possible to make it able to resist the poison of a bacterium, without interfering with its growth in the body. When we enable an organism to resist or neutralize a bacterial poison, we say that we make it poison-proof. (Kochs: Giftfestigung.) The serum cure in diphtheria and tetanus aims at making the body poison-proof. Therefrom the name anti-toxin, which means an antidote. The serum cure in typhoid and cholera has for its object to make the organism immune, that is to endow it with properties that render it unfit as a suitable soil for the respective bacteria.

The genuine intoxication diseases are not very frequent in actual life, but their product is common enough in the pathological laboratories, where animals are poisoned by fluids that by a Chamberlain filter have been separated from the bacteria, and only contains the poisons secreted by them. But the study of intoxication is very important, as even in infective diseases the local poison effects are overshadowed by the effects of the absorption into the circulation of the poisonous substance from the bacteria.

The infective diseases, and the mechanism by which they are brought about, demand, therefore, the closest study, which also has been given them in recent years. As our ideas become wider and our insight clearer, we feel the necessity of new terms, that more closely represent our conceptions, than the older names that often have been used in a loose and misleading manner.

Infection can take place on the body surface, the external and the internal, by direct implantation; for instance when a pus microbe gains access to the organism by an abrasion of the skin, or when tubercle bacilli enter the lung through a solution of the continuity of the vesicular epithelium, or when streptococci enter the testicle by emigration from the deeper urethra along the spermatic cord. But also organs that have no direct communication with the external world become infected; for instance, joints, the thyroid gland, the pleura; these organs are reached either through the blood current, or through the gradual invasion from neighboring organs; consequently indirectly; its chief importance is that it serves as carrier or dissemina-

tor of infection. We therefore distinguish between evogenous infection, where the infection comes more or less directly from the outside, and hematogenous infection, where the infecting material is carried to a particular territory through the blood current.

The entrance into the body may either be a simple resorption, or an active immigration, and its place is designated as the atrium or port of infection; if the bacteria multiply in a place, we designate that place as a focus.

This focus is not necessarily the same as the port of entrance, for the bacteria may there be absorbed and carried for instance by the lymph current to a more or less remote part, where a focus may develop at the same time as the original place of entrance heals without visible reaction. Take as an illustration the common case of a prick with an infected pin or needle. The original wound is the atrium or port of entrance which often, even usually, heals without leaving a scar; the staphylococcus for instance that was lodged on the pin is carried into the lymphatics, is lodged there, and multiplies; from this focus proceed then lymphangitis, lymphodenitis, and suppuration. Such a process would be called an exogenous infection by resorption. If in our instance the staphylococcus by arroding a capillary that is not thrombosed enters the blood current, and an infection of an internal organ takes place in this manner, then we have an hematogenous infection by resorption. It does not often happen in the human species that the blood itself serves as a culture soil for the bacteria; but it happens often enough in animals; for instance in anthrax, in mouse septicemia, in erysipelas; such an infection of the blood should be designated as bacteriemia.

The name septicemia has been used for this purpose, and Kotch uses it in that manner; but the name has also been given to other processes that ought to be distinguished from it; notably the poisoning of the blood by bacterial products, for which the name toxinemia ought to be used. As septicemia has been used in more than one sense it would seem better to abolish its use entirely, so much the more so, as the name literally means decomposition of the blood, a process that does not take place in the cases thus designated. It must however be remembered that cases of pure toxinemia, of poisoning of the blood by bacterial products with entire absence of bacteria are not very common; they are probably in most cases present for a short time, and in small quantities.

An infection may lead to one single focus, or there may be several; it may then happen that some of these have arisen from the first and original one; we speak therefor of primary and secondary foci. If the infection from the primary focus spreads through the intercellular spaces, through the lymphradides we call this localization, infection by continuity. If on the other hand the secondary infection takes place through the blood current, and consequently shows itself in more distant regions, we call it metastasis. An infection of a gland in case of lymphangitis is an instance of infection by continuity; the various pus-localizations and infarcts in pyemia illustrate metastasis.

An infection is not necessarily produced by only one kind of bacterium. Two or more kinds may at the same time effect an entrance in the same atrium, and may localize from that in secondary foci, where we find the same bacteria as in the original focus.

Virchow calls this infection homologous infection. But an infective focus in which a certain kind of bacterium has settled may become secondarily infected by another kind of bacterium, and this process is by Virchow called heterologous infection, by others deuter-opathic infection.

As an illustration of a heterologous, or deuter-opathic infection can be taken the infection of a tuberculous fistula by a staphylococcus invasion.

A homologous infection by two kinds of bacteria, for instance by the tetanus bacillus and a pus-coccus (at the same time and at the same place) is sometimes called a mixed infection; this name might also be used of a heterologous or deuteropathic infection, wherefore the French school reject this name, and use the more logical designation of polymicrobic or monomicrobic infection.

It is known that there is a reciprocal action between the various bacteria when they at the same time infect the organism. Such co-operation usually produces a higher degreee of virulence and a more severe type of illness; in some cases bacteria that are harmless (not pathogenic), when present alone, may produce disease by their combined action.

The products of bacterial metabolism that poison the organism are of two different kinds—1st, the ptomaines, that are well defined chemical

bodies; we call them toxines, if they have poisonous properties, which they usually have:—2nd, the ferments, of which some are poisonous and designed as toxalbuminoids; many of the ferments are not poisonous, but have peptonizing, fermentative, or color producing effects.

The toxines act rather rapidly; immediately upon their resorption the symptoms of poisoning appear; when they are expelled, their effects cease. The toxalbuminoids take longer time, which is to be expected from their fermentative action, but their effects last longer.

There are of course yet a great many unsolved questions in the pathology of infection, and it may be that some of our present ideas will undergo modification. There is now no longer much disputet about Metschnikoff's theory of phagocytosis, but it may be that it is not so prominent a factor in the mechanism of the organic reaction, as its discoverer originally thought.

It is with this theory as with every new one, that it is apt to engross our attention too much and too exclusively in the first enthusiasm of its disciples. But in this it does not differ from other great theories that have made their appearance within the memory of living men, for instance Darwin's evolution theory and Pasteur's discovery of the microbic world, and the various theories based upon it. Just as these theories have been modified, in some respects restricted, in others enlarged, so our modern theories of inflammation must be prepared for the same fate. But just as these two theories have revolutionized our conception of nature, so it is believed that the modern theories of inflammation will form the basis for new conceptions of disease,and a new theraputic era.

CHLORINE IN THE TREATMENT OF DIPHTHERIA TESTED IN A BROOKLYN HOSPITAL.

On March 5th this journal published a letter from Dr. P. M. Bracelin, of Iowa, on the value of chlorine, specially prepared, in the treatment of diphtheria. Since that time the board of health has taken the matter up and has made a test of its value. While we have not yet received the official report, we are informed that in the Kingston Avenue Contagious Disease Hospital of Brooklyn, out of twenty-five cases treated by this method there was but one death, and this case had received antitoxine in connection with the chlorine treatment. This one death occurred from cardiac failure. These tests show a death-rate of about four per cent., which is a remarkable reduction from the average.—New York Medical Journal, October 29th, 1898.

THE SECOND STAGE OF LABOR AND SOME INJURIES TO THE PARTURIENT CANAL.*

By R. E. CUTTS, M. D., Minneapolis.

There is probably no subject more familiar to the profession than that of the second stage of labor; and it might be considered by some to be a waste of time to bring it up for discussion. However when we consider the great number of gynecological cases one meets in his practice and upon inquiry we learn that a large percentage of them date from a confinement, this alone is surely sufficient reason for investigating the accouchment to ascertain if possible the cause of the trouble.

It is our purpose to consider the second stage of labor only in its relation to the mother; and as this stage is the most important part of labor and as it will afford sufficient material for discussion for our limited time this evening the other stages will not be considered.

But a short time ago while speaking with one of the younger members of our society about obstetrics and in particular about the small fee received for that work here, he remarked that was all it was worth as 99 cases out of 100 would deliver themselves in time if left alone and no skill was necessary in these cases.

How many physicians treat confinement cases this way? If such is the belief we might better turn this work over to the midwife for surely five or ten dollars is sufficient compensation for such services.

During the second stage of labor the physician should remain constantly by the patient, carefully noting the progress of the presenting part, the tension of the maternal soft parts and the condition of the foetus.

Granting that the first stage of labor is completed, the contractions strong but the head not decending, also granting that the pelvic, as well as the foetal, measurements are normal, likewise the position of the presenting part, examination reveals the sac of water, bulging during the pains, through the cervix. Hydramnios may be present and if such is the case we may expect to have uterine inertia. Sometimes there is so little amniotic fluid as to cause no separation of amniotic membrane from the foetal scalp and in this

*Read before the Hennepin County Medical Society.

condition the membrane is very hard to recognize.

In any event the membrane may be so tough as to prevent the descent of the head for hours thereby causing the exhaustion of both mother and foetus, which may be avoided by the recognition and the rupture of the membrane. I mention this simply because I have known of patients going for hours with an unruptured membrane when, by its rupture, labor was speedily terminated.

Let us suppose our patient is a nervous hysterical primipara, well along in years, who has been made much more nervous by the necessary pain in the first stage, that the head has passed through the cervix and descended to a point where the vertex begins to appear at the vulva, the perineum is beginning to be put upon the stretch, the pain is increasing due to the increased tension of the soft parts and the narrowed condition of the vaginal outlet and our patient has only one thought or desire,—that is to force everything through and have it over with.

We have here a body—the perineum—upon the protection and preservation of which depends our patient's future health. With it intact she is soon to regain her former health, with it ruptured she is liable to have retroversion, retroflexion, prolapsus—incomplete or complete,—prolapsed ovaries to say nothing of the results of a complete rupture of the perineum involving the rectum. The symptoms and suffering from these conditions need not be mentioned here but let us see what may happen to the structures involved in this accident.

In the first place the occiput in coming under the subpubic ligament forces the brow and face posteriorly, putting the levator ani muscle on extreme tension. As this is a point where the progress is apt to be arrested sometimes for hours, unless assistance is given, the fibers of the levator ani muscle are apt to become separated or ruptured in the median line or so greatly stretched by the prolonged and severe tension as to very greatly weaken their contractile power.

Remembering that we have a fasciculus of the levator ani muscle rising from the inner surface of each half of the body of the pubis passing around the vagina on each side to be inserted in a median raphe and sphincter muscle of the anus and also remembering that we have another source of origin from the spines of the ischia and the white line extending from this point toward the pubis the muscle then passing down encircling the rectum to be inserted on the coccyx, in the median raphe and inner sphincter of the anus.

With the separation of the fibers on the anterior wall of the rectum the upper support to the cervix is lost; in time the rectal wall bulges dragging the vagina with it and the uterus is permitted to descend to just the extent of the separation of the levator ani. By the loss of support to the cervix it is permitted to fall downward and forward thereby changing the position of the uterus from a nearly transverse position in the pelvis to one of the perpendicular, or approaching the axis of the vagina.

From this condition of retroversion we soon get retroflexion simply due to the change in force of abdominal pressure on the uterus.

To be sure we find this muscle varying in size and strength in its original condition in different women just as much as we find the biceps varying in different individuals. In one case we find upon examination the vagina enlarged, the tissues relaxed with no sphincter action except in the lower half inch while in another the posterior vaginal wall is held up taut nearly its entire length and a contraction of the vaginal muscles shows sphincter action for two and one-half inches. Some contend it is the levator fascia that gives support which is true to a certain extent; however we find the fascia varying in strength in direct ratio to that of the muscle. Supplementing this action of the levator ani muscle and fascia we have the other muscles of the perineum of which the transverse perinei are the most important. The perineal body is made up of the union of the different muscles in the median raphe. And it is especially to the protection of this body that I wish to call your attention to-night.

Some authorities tell us the fourchette will be ruptured in sixty per cent of primiparae and that the perineum will also be lacerated in thirty-five to forty per cent while ten per cent multiparae will suffer from laceration. Tears of the fourchette and minor lacerations of the perineum are in themselves of slight importance unless they are associated with general relaxation of the vaginal outlet.

But the deeper tears of the perineum and the prolonged tension of these structures interfer-

ing with the circulation, producing relaxation of the vaginal outlet are almost certain to permit some of the uterine displacements. To a large degree these conditions are avoidable and before describing the protection of the perineum let us consider the methods used by some of our leading authors.

Lusk recommends the method of Hohl and quoting from an article by A. D. Wilkinson in the Western Medical Review who gives the methods better than I have been able to obtain from other sources: He says; "Hohl advises the application of resistance to the head by pressing the thumb against the occiput above and the index and middle fingers posteriorly against that portion of the head nearest the fourchette: he claims absolute control may be had over the advancing head."

"Fastbender places the patient on the left side, stands behind her and applies the index fingers of the right hand to the occiput, while he inserts the thumb as far up into the rectum as possible. The movements of the head are thus under his control. During a pain it may be retarded, and in the interval it may be helped onward. He also applies the forceps in order to control the advance of the head, holding back at the height of a pain and gently assisting downward in the intervals." "Goodell's method of effecting a relaxation of the perineum is done by pressing the thumb of the left hand against the occiput, while the middle and index fingers of the same hand are inserted into the rectum, and caused to drag forward and upward the distended perineum during a pain." "Mayfair places the thumb and forefinger of the right hand on either side of the head upon the distended perineum and the latter is gently pushed forward over the head during a pain." "Merkerttschiantz places his patient in the dorsal position, the thumb and fingers of both hands are pressed against the distended perineum on both sides, and during a pain the tissues thus grasped are pushed toward the central line; as the head begins to emerge the left hand is placed above with the ulnar border in apposition with the mons veneris and the middle and index fingers about an inch from the thin border, pressing the upper portion of the perineum toward the medium line."

"Episiotomy is recommended, which consists in making a lateral incision of the vulva for the purpose of relieving vulvar and perineal tension. This is done during the height of a pain upon the mucosa just within the vulvar opening, about one-half inch upon the vaginal walls on both sides alike. They should be from one-half to three-fourths of an inch long and not more than one-fourth of an inch deep, and should be closed immediately after labor."

"Ritgen in his efforts to elevate the head places the tips of the fingers of the right hand upon the perineum back of the anus and close to the point of the coccyx and makes pressure upward and forwards between pains, upon the frontal bone of the fetal head."

"Olshausen places the index and middle fingers of the right hand into the rectum and pushes through the recto-vaginal septum into the mouth or beneath the chin of the child, and presses out-ward and forward between pains.' '

The method I wish to describe is one I learned from Dr. H. Mc. M. Painter, of the attending staff of the Lying-in-Hospital of the city of New York during my service there as member of the resident staff in '94. The method is practically this; When the vertex begins to present at the vulva the patient is turned on her left side, brought near the right side of the bed, her knees are flexed, a folded pillow or quilt is placed between them to hold them slightly separated, she is entirely covered with a sheet or some light spread, excepting the lower part of the buttock thus exposing the perineum to view. The light from a window or lamp should be such as to give the best view of the parts at all times. Then seating yourself on the edge of the bed at the patient's back and placing your left hand between her thighs the fingers are allowed to rest on the presenting occiput; the elbow presses on the fundus uteri, while your right hand is free to aid expulsion of head when indicated.

When the head has descended enough to reach the orbital ridge of the frontal bone at the point nearest the coccyx with the thumb of your right hand you have complete control of the situation; and this occurs before laceration of the perineum can take place. The patient should now be given sufficient chloroform to allow of complete relaxation of parts. The uterine muscle will continue to contract after the relaxation of the striated muscles; however with your patient in the position already described the descent of the head can be easily controlled by making pressure posteriorly with the tips of the fingers of your left hand resting upon the foetal occiput. The delivery of the head, to be performed between the

uterine contractions, is accomplished thus: With the thumb of your right hand resting on the orbital ridge of the frontal bone you make pressure anteriorly or to cause extension of the head, thus putting the perineum on the stretch until the margin begins to look white, which is an indication that it has reached its limit of stretching, then with the tips of the fingers of your left hand crowd the head back so as to relax the perineum but not so far as to lose the hold on the orbital ridge with your right thumb; by this relaxtion of the perineum, which should be continued for a few minutes at a time, the blood is allowed to circulate through the tissues restoring them to their normal condition. Then repeating the pressure with your right thumb on the brow, putting the perineum on the stretch as before you find that the occiput will protrude some-what more than the previous time before the margin of the perineum becomes white showing the necessity of its relaxation. By repeating this process until the eminences of the frontal bone appear at the margin of the perineum the brow and the face may be allowed to slip out over the perineum between pains without fear of any serious damage to that body, thus delivery of the head is practically accomplished by a change from flexion to extension with but very little descent. With the head delivered there should be no further difficulty in delivering the rest of the foetus. Perinei supposedly torn by the foetal shoulder are in most instances torn in delivering the head but not recognized until after complete delivery of the babe the accoucheur believes it to have been done by the shoulder.

The perineum beginning to tear at the margin and kept on the stretch by the head is almost unrecognizable; in fact it is entirely so, unless you have good light on the perineum and are close enough to make minute observation. The tension of the parts due to the pressure of the head prevents bleeding from the torn margin and unless the head is crowded back as in the described process of delivery it is not recognized during the delivery of the head and consequently the shoulder gets the blame.

The advantages of this method are:

You have your patient on her side thus bringing the perineum into the best of view which could not be done on her back without unnecessary exposure; in fact the patient does not realize any exposure, to speak of, in this position.

With the left elbow over fundus of the uterus one can make strong pressure when needed or by slight friction with it excite uterine contractions.

By using the right thumb on orbital ridge of the frontal bone one has as complete control as if two fingers were in the rectum which must become septic and which is unsurgical to say the least.

By working the head back and forth in the process of stretching the perineum the blood is permitted to circulate through all parts at frequent intervals thus preventing injury and allowing greater elasticity. The process should consume about an hour in the ordinary primipara.

CEREBRO-SPINAL MENINGITIS WITH CASES ILLUSTRATING THE VALUE OF LUMBAR PUNCTURE.

By C. H. HUNTER, M. A., M. D., Professor of the Practice of Medicine in the University of Minnesota.

The purpose of this paper is a review of some recent cases, occurring in our midst, of meningitis, in the light of the monograph by Councilman. This booklet is the result of the combined labors of Drs. Councilman, Mallory and Wright of the Harvard Laboratory. It is published and distributed by the Mass. Board of Health as one of its reports, the cost being paid out of the state funds. While none of its conclusions may be called strictly original, its analysis of the development of the literature of meningitis is so full, the marshalling of the evidence that Weichelsbaun's bacillus intra-cellularis meningitidis is the real cause of epidemic cerebro-spinal meningitis, is carried out with such wealth and accuracy of detail,and withal,so convincingly,and the diagnostic value of Quincke's procedure of lumbar puncture is so clearly demonstrated, that the booklet is a real and masterly contribution to medical literature. From any point of view, its publication by a state board of health, with popular approval, can be viewed with the livliest satisfaction. I have secured three copies for the library. They are now on the table for your inspection. The new methods of study have certainly been as satisfactory, applied to this disease, as they have been in other quarters.

It may now be considered settled that inflammation of the brain and cord (meningitis) is always of bacterial origin. These tissues are favorable soil for the growth of first, the tubercle bacillus, tubercular meningitis, second, for the

streptococcus, meningitis following trauma or extension from infected cranial bones and cavities, third, for the meningococcus—epidemic cerebro-spinal meningitis. Indeed these tissues seem the natural habitat of this germ. When found elsewhere in the body they cause accidental or complicating lesions, as the peculiar pneumonitis nephritis, etc. This disease thus constitutes a true cerebro-spinal fever, as it were. Fourth, for the pneumococcus of lung fever. Certainly is this true in sporadic cases. It may be considered yet undetermined that it grows epidemically.

The meninges furnish also, but much more rarely, a crop of the secretive but ubiquitous gonococcus, occasionally of the typhoid bacillus, and indeed, of all of the germs of infectious diseases. There seems some reason to suppose that they furnish favorable soil for the numerous intestinal germs developed during a gastro-enterocolitis, though it is well to remember in this connection, the dictum of Stokes, quoted by Osler, that "there is no single nervous symptom which may not and does not occur independent of any appreciable lesion of the brain, nerves, or spinal cord." This was said, I believe, before the introduction of searching microscopical and culture methods. On this point, case XII of the series reported, has an interesting bearing.

Epidemic cerebro-spinal meningitis is spoken of in the text books, for the most part, as easy of diagnosis. This may be true when the epidemic is in full course and the attendant is on the alert. However, it has occured to me to be in doubt, and justly, I think. In our health reports too many cases have been reported in the practices of a few, for them to have been always correct. While ordinarily, a diagnosis of meningitis being present, (inferred from the symptoms) may answer fairly well, it must have happened to a good many, desiring accuracy and demonstration in diagnosis, to wish for something more.

This brings us to the cases I have been able to collect in town, through the kind co-operation of a number of physicians, and to a consideration of those diagnostic methods that seem the most feasible.

No. 1. G. W. 24 years old. City Hospital. Symptoms. Onset sudden, headache, backache, rigidity and vomiting, speech involved, unconciousness. Result, death in 25 days. Post Mortem, pus at base of brain.

No. 2. R. K. 10 years old. City Hospital. symptoms: onset sudden, headache, rigidity, opisthotonos, temperature, 98 to 105., herpes, semi-conscious. Result: Recovery in five weeks.

No. 3. M. S. Age 14 years. City Hospital. Symptoms. Onset Sudden, Convulsions, unconsciousness, headache, backache, rigidity not well marked, herpes. Result: Death in 11 days.

No. 4. S. Age 14 years. Dr. King. Symptoms Complained two days of headache. Walked down town. Convulsions, vomiting, unconsciousness, and semi-unconsciousness, headache, herpes, rigidity. Wild. Result: Death in 11 days.

No. 5. N. B. Age 8 years. Dr. Beard. Symptims: Gastro-enteritis. Gradual. Headache, rigidity, fixed strabismus, unequal pupils, unconsciousness. Result: Death in 7 days.

No. 6. S. 9 years old. Dr. Roberts. Symptoms. Abrupt, while at play. Headache, stupor, chill, temperature 104. Petechiae over chest. Result. Death in 16 hours. Post Mortem. Congestion of the lung. Subsequent case led to diagnosis of epidemic cerebro-spinal meningitis.

No. 7. Age two years. Dr. Roberts. Symptoms. (Two weeks after No. 6.) Abrupt. Chill, temp. 104, general pain, rigidity, general rashes. Result: recovery in six weeks.

No. 8. Age 4. Feeble minded. Dr. Roberts. Symptoms. (Four weeks After No. 6.) Abrupt, chill, opisthotonos, general rashes. Result: Recovery in six weeks.

No. 9. Agnes M. 22 years. Dr. C. A. Smith and C. H. Hunter. Symptoms. Began gradually, like typhoid, severe backache, opisthotonos after a few weeks. Double vision. Result: Death in six weeks. Lumbar puncture with cocaine in the 3d week pneumococcus from the turbid serum.

No. 10. Harry S. 22 years. City Hospital. Symptoms. Chill, delirium, headache, backache, rigidity, herpes and offensive breath. Result: Death in 16 days.

No. 11. Clara T. 17 years. City Hospital. Symptoms. Severe headache. Second day, rigid neck and pain in back. Stupor, herpes, pupils immovable and typical rashes. Result: death in 3 days. Albumen in urine.

No. 12. Willie D. Four years. Dr. C. H. Hunter. Scar in lip from dog bite two months before. Knee was resected at two. Symptoms. Abrupt attack, emesis, tonsillitis. Was out in three days. Acted strangely with throat. Fourth day delirious. Consultation fifth day, but no diagnosis fixed. Seventh day, my first visit.

Fever 102, delirium, vacant look, unable to drink from convulsive movements of throat, extending to body. Rigid neck, dilated pupils responding to light. Eighth day could be aroused for a time, sat up in bed. Same convulsive movement of the throat extending gradually to entire body on attempting to drink, ending in unconsciousness. Bowels loose and foul. Widal reaction absent. Blood count, 18000. Lumbar puncture failed to obtain any fluid. Opisthotonos at one time. Last two days relaxation except during convulsions, stupor, coma and death on the 9th day. Nothing microscopically abnormal was noticed at the autopsy, save possibly, signs of entero-colitis. Pneumococcus and streptococcus cultivated by Dr. Wilson. Exudate on meningitis could be demonstrated microscopically.

No. 13. Hackett. Four years. C. H. Hunter. Symptoms. Pharyngitis, bronchitis, gastro-enteritis, lymphangitis, widal reaction present. Diagnosis—typhoid fever probably. Seventh day headache, neck rigid, gradual increase of meningeal symptoms. Extensive rigidity and contractures, delirium, stupor and death on the 12th day. Lumbar puncture on 8th day secured an opalescent fluid which was sterile. Blood count on 8th day, 23,000. An earlier blood count could have excluded the idea of typhoid.

No. 14. M. P. Age 22 years. C. H. Hunter. Symptoms. Came into office Thursday complaining of severe headache; fever, foul tongue. Sent to bed. Put on milk diet. Friday, better, still headache at night. Saturday in bed. Sunday morning, violent headache and vomiting. Rigid neck. Suspected meningitis but was not prepared to make lumbar puncture. Relapsed into sleep and remained in stupor all day Sunday. Aroused in the evening. Was dull, had headache. Walked to buggy and rode ten blocks Monday morning. Temperature 100. Breath foul. Complained Tuesday a. m. of severe headache during the previous night. Otherwise better. Found him dead at 12 Tuesday. Temperature 108. Post mortem, lumbar puncture gave purulent serum, containing meningococcus (Dr. Corbett).

No. 15. M. G. Eight years. Dr. LaLiberte. Symptoms. Onset sudden, pain, rigidity. Wasting remarkable. Bed sores. Result—death in 6 weeks. Lumbar puncture in the 5th week secured a sterile opalescent fluid.

No. 16. Child. Dr. Head. Sudden attack of headache, rigidity and fever. Death prompt. Pneumococcus in miningeal pus found post-mortem.

Nos 17 and 18. Two cases. Dr. Matchan. Long course of irregular fever, pain, rigidity and contractures ending in recovery.

In this series of 18 cases, five or 28 per cent recovered—about as in other epidemics.

In case 9 the development was that of Typhoid fever. As the diagnosis was settled so promptly by Lumbar puncture in the third week, it is probable that it might also have been arrived at earlier.

Case 12 exhibited no effusion at p. m. The meningitis was proven only by microscopical examination of tissues.

Case 3. An earlier blood count showing leucocytosis would have discredited the diagnosis of Typhoid if the meninges had given leucocytosis. There seemed no occasion for lumbar puncture earlier than the eighth day, the date of the first appearance of head symptoms.

In case 16 lumbar puncture on Sunday a. m. the first moment of cervical rigidity would have led to a correct diagnosis, and safer prognosis.

Lumbar puncture is easily done, is not painful and almost certainly will put us in possession of correct knowledge as to the very essence of the disease with which we may be dealing. A good description of the procedure in lumbar puncture and discussion of its value is to be found on p. 439 of Vierordt's Medical Diagnosis, ed. 1898.

Coverslide examinations of cultures at the State Laboratory will settle the diagnosis.

Operation for Lumbar Puncture.

The patient lies upon the side—the back bent. A hypodermic needle with lumen calibre of No. 24 wire will do. Boil the needle, wash the skin with alcohol. Press the finger of the left hand at the side of the spine into an intervertebral lumbar space. With the right hand force the needle in parallel to a spinous process and until the point of the needle is felt to be in the spinal canal. The fluid follows the piston.

The University of Genoa has given its M. D. to Miss E. Bonomi, which is said to be the first time the degree has been given to a woman by an Italian university.—Boston Medical and Surgical Journal, Sept. 22nd, 1898.

REFLEX COUGH.

A. V. McINTYRE, M. D., Hudson, Wis.

Strictly speaking, all cough is reflex and of nervous origin. The term "Reflex Cough" is, however, commonly used to denote that which occurs without any evidence of disease of the larynx, trachea, bronchi, lungs or pleura.

The profession recognize two kinds of cough, one, the expectorant cough, the purpose of which is to drain and expel secretions from the lower air passages, the result of inflammation of the lining mucous membrane; the other, the non expectorant, or, as I shall designate the "Reflex or Nervous Cough," due to numerous reflex causes, such as gastric irritation, ear disorder, aneurysmal, glandular or other pressure on the pneumogastric, superior laryngeal or sympathetic nerves. This cough may also be due to an elongated uvula, enlarged tonsils, a granular state of the pharyngeal or laryngeal mucous-membranes, polypi, or hypertrophic rhinitis, foreign bodies in the larynx, trachea or external auditory meatus; undue dryness, hyperaemia, alteration in the quality or quantity of the provisional secretions.

Cough is not a disease to be treated, but a symptom to be traced to its source. An inspection of the pharynx and larynx, and a physical examination of the chest will generally suffice to detect the kind of cough with which you have to deal. To illustrate the cough in question I will relate the histories of a few cases.

Case I.—In February, 1895, I was called to a child three years old with the following brief history. The mother stated that since early fall her daughter had had a dry, hacking cough, much worse at night and often accompanied with night sweats; poor appetite and emaciated; everything had been tried for the child, but she was gradually getting worse. I found on examination of her nose and throat that she had hypertrophic nasal catarrh, enlarged tonsils and glands on both sides of the neck above and below the clavicle, bronchial breathing, a slight fever, and a constant hacking cough. The cough was attended with no expectoration. The family history gave no evidence of consumption, nor did any of the family have enlarged glands or tonsils (showing that their condition is not always hereditary, as is supposed by some). I considered this a case of purely reflex origin, due to the mouth-breathing, and pressure of some enlarged lymphatic glands, pressing upon either the superior laryngal nerve, or some branches of the sympathetic nerves or both. I prescribed syrup of hydriodic acid in drachm doses after each meal. In one month the cough was entirely gone, the enlarged glands in the neck had disappeared, the tonsils perceptibly decreased, and upon removal of the hypertrophied membranes of the nose, the case was discharged practically cured.

Case II.—A child four years old. History of case. Child had a cough for a year, breathed entirely through the mouth, and had often said that it had a nail in its nose. I noticed that the child's nose was swollen and closed, and suspected some foreign substance in it, and that it must have been there for a long time, and the cause of the bad odor and the cough. On examination of the chest I found no bronchial or lung trouble, and was convinced that the cough was due either to the occluded nostrils or to the mouth-breathing, or both. I irrigated the nose thoroughly and on examination found a foreign body in one nostril and the other completely filled by hypertrophied membrane. I removed the foreign body, which proved to be a small screw that had probably been there for a year; then cut away the superfluous membrane from the other nostril, and without further treatment the cough and catarrh were cured.

Case III.—A man thirty-five years old came with a cough and inability to breathe at night. He had a hacking cough, constant irritation in the upper part of the pharynx. On examination of the nose and vault of the pharynx I found it completely filled with polypi and swollen mucous membranes. I removed three polypi at three different sittings, and treated him for the catarrh thereby restoring his nose breathing and curing his cough.

Case IV.—A man with a dry, spasmodic cough; said he could not "raise" nor sleep well at night. There was no loss of flesh and he seemed well in every way. Examination of his chest gave negative results; nor did his family history give any light on his case. But inspection of the pharynx showed both tonsils somewhat enlarged and the uvala very long, and pendulous, the lower end resting on the base of the tongue. I removed a quarter of an inch of the uvala, and waited for results. The cough disappeared.

These cases are not common in infants, but frequent in older children. In nearly all the varieties the cough is worse at night and is often confined to that time. The general health may not be affected except from disturbance of sleep or from pain. The precise cause in any given case is discovered only by a careful examination of the ear, nose, pharynx, heart, stomach, lungs, liver, and the patient's general condition. Enlarged bronchial glands may be suspected in patients of scrofulous, or tuberculous parents. Adenoids in the vault of the pharynx or perforations in the drum of the ear should be sought for when called upon to treat a cough. Do not prescribe "The best cough mixture" you know; but examine his lungs first and if you find no trouble there, look for some reflex cause such as I have described. Remove the cause and you will cure the patient. If the cough appears to be purely nervous in origin, the best results will follow the use of the bromides, or iodide of potassium during the day, and a dose of antipyrene at night.

THE HUMAN BRAIN.

A German biologist has calculated that the human brain contains 300,000,000 nerve cells, 5,000,000 of which die and are succeeded by new ones every day. At this rate, assuming the correctness of the German's guess, we get an entirely new brain every sixty days.—Boston Medical and Surgical Journal, Sept. 22nd, 1898.

THE CASE OF MRS. MAYBRICK.

Mrs. Maybrick has now been confined in an English prison for ten years, having been convicted of the alleged murder of her husband by the administration of arsenic. It is generally believed by those most competent to form opinions on the case that she was convicted on very indefinite not to say contradictory testimony, and, unless there are facts unpublished and unknown, except to those in authority, it looks as though Mrs. Maybrick is held for punishment for some crime for which she has never been tried. It is well known that the Home Secretary has refused the appeals of societies, individuals, and the almost universal demand of the people of England and America for her release, and even the request of our President endorsed by the recommendation of the Lord High Chief Justice of England himself .

Edison called the man who thought his patents were now free "A Himalayan Andesian jackass." That was piling Ossa on Pelion.

A TRANSPLANTATION OF THE CORNEA.

By C. H. KOHLER, M. D., Minneapolis.

It was not intended to report this case until there was something definite and satisfactory to say of the result, but the misleading and inaccurate accounts which appeared prematurely in the public press make it desirable to give the profession a more exact and lucid statement through the proper channel. One would glean from these reports that complete restoration of the sight is now practically certain, and that in the operation the entire anterior part of the eye was excised, when in reality only a small circle about the size of the ordinary pupil was removed.

Then, too, the operation has been done very frequently in Europe and also a number of times by New York and Chicago physicians. The reports of the results, however, have been very conflicting. In this country it has never been successful enough to warrant further experimentation, while I am informed by an oculist who just returned from Vienna, that the operation is being done as frequently in Europe as ever. In this country preference seems to be given to Van Milligan's operation, in which a cap of transparent celluloid or glass, shaped like an artificial eye, is used in place of the graft of the rabbit's cornea. The operation performed in this case is Von Hippel's. The patient was a woman of 21 years, totally blind in the right eye for 3 years and in the left for 8 years. Blindness was result of dense corneal opacities due to trachoma. The disease began when she was 8 years of age and continued until the lids were denuded of mucous membrane, she being where she could not or did not receive proper attention. Two years ago she came to this city and was treated for some time, and later, at divers times, had iridectomies performed. The last was 6 months ago and like the others did not favorably alter the condition of the vision to any perceptible extent. This was the last effort to do anything until about three weeks ago when she came to me. The case was absolutely hopeless with the exception of the faint possibility of some such operation as was done and she, being determined to make one more effort, a transplantation was decided upon. A corneal trephine, an instrument especially made for these operations, was obtained through the courtesy of Dr. Casey Wood of Chicago and a good sized, healthy rabbit procured for the work. Complete sterilization of the eye of the patient and that of the rabbit was necessary without the aid of any but the mildest antiseptic solutions. In the former this was done in the usual way, but with the latter it was much more difficult. We began by wrapping the rabbit in bichloride towels and sponging the head thoroughly with soap and water, and then trimming the hair about the eye as short as possible and again sponging the eye freely. This was followed by applying

a wet bichloride bandage about the head, which left nothing but the eye in sight. The eye and conjunctiva were then sponged and irrigated with a 1 to 10,000 bichloride solution and later, by repeated irrigation with a slightly saline solution. A 4 per cent solution of cocaine was the only anesthetic used. It was instilled several times in the eye of the patient, but only once in the eye of the rabbit, and that just a short time before the piece was removed. In the operative procedure the lids were held back with a speculum and an assistant firmly held the eye with a long rat tooth forceps. The trephine was placed over what appeared to be the clearest part of the cornea, which was a trifle below the exact center, and a circle cut down through the anterior layers to Decemet's membrane and the disk carefully exsected, leaving only the posterior layer above the aqueous. As quickly as possible a similar piece was cut from the rabbit's eye, held in a warm salt solution until properly unfolded (this tissue immediately curls up) and then placed in the patient's eye. The lid was closed over it, the eye dressed and not disturbed until the fifth day. By this time complete and perfect union had taken place . The piece transferred was clear, but beneath it could be seen some opacity in the membrane left. On the tenth day the other eye was operated on in the same manner, except that the entire thickness of the cornea was removed and with it a part of the iris which was adherent to it. The loss of the aqueous greatly complicated matters, the eye collapsing so that the cornea appeared as much concave as it is normally convex. It was very difficult to fit in the piece from the rabbit, and this was hardly satisfactorily done at once. But, after waiting 15 minutes for it to fill up it assumed a more normal condition and a better adjustment was affected. After 36 hours the eye was opened and the piece found in perfect position, the aqueous chamber filled and sealed so perfectly that the eye was in normal shape. Nothing was necessary to hold the graft in position owing to the short time necessary for the plastic exudate with the aid of the upper lid,to effectually seal the anterior chamber, And thus the aqueous fluid soon served as a splint below while the lid was sufficient above to maintain perfect apposition.

At this writing both grafts appear perfectly united and retain good transparency except as stated in the left. In the right eye the iris from which all evidence of normal or artificial pupil has been obliterated, can clearly be seen through the transplantation and iridectomy must remove this before sight can be restored. Some time must elapse, however, before this is attempted and then only if the piece still retains its translucency. The union of the piece is so perfect that it seems now almost a part of the eye and this would lead to much hope if the iris were not in such bad condition. As it now appears the question of sight is a decidedly uncertain quantity.

REMOVAL OF TRANSVERSE COLON AND PARTIAL RESECTION OF PANCREAS AND LARGE CURVATURE OF STOMACH, WITH LATERAL SUTURE OF BOTH MESENTERIC VEINS.*

By A. SCHWYZER, St. Paul, Minn.

The case, which seems to be the only one reported of entire removal of the transverse colon and also unique for its lesion and lateral suture of the mesenteric veins, was as follows:

A carcinoma involving the whole transverse colon, and including the gastrocolic ligament, as well as reaching to the base of the meso-colon, was removed. In dividing the base of the meso-colon, the inferior mesenteric vein was laterally opened to the left of the duodeno-jejuneal valve and sewed up laterally. The superior mesenteric vein was also laterally opened to the extent of over one cm. at a point just before emerging under the head of the pancreas. Tremendous hemorrhage, though immediate and effective compression was made.

The tumor, which went close to the stomach, necessitated resection of the large curvature of the stomach for a distance of seven cms. In removing the deepest part of the tumor, the division line had to go partly through the superficial layers of the pancreas. In and under the head of the pancreas a small area of infiltrated tissue had to be left behind and was sewed over. Hepatic flexure of the colon was united to the splenic flexure by an end-to-end anastomosis with silk suture.

The carcinoma, which was double the size of a man's fist, was of the type of the carcinoma simplex. No signs of the adenomatous type were found. With the tumor a large piece of healthy colon had to be removed on account of the tumor growing into the mesocolon. The whole omentum had to be sacrificed also.

The operation was made on October 16th at St. Joseph's Hospital. After a somewhat eventful time of recovery, though not on account of his bowels, the patient left the hospital on November 29th in a very much improved condition, having a very good appetite, feeling stronger every day and having gained eleven pounds since the operation.

December 18th: It might be added that the patient returned to his home in Havre, Montana, last week after gaining six additional pounds during the last two weeks. He has absolutely no pain whatever and is exceedingly satisfied with the result of the operation.

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*Abstract of a paper read before the Minnesota Academy of Medicine, December 7, 1898.

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IS IT GRIP?

The Medical News of Dec. 24th has an editorial on grip, in which our esteemed contemporary seems to indicate that it believes the present widespread epidemic commonly supposed to be grip is not that disease. Its reasons for that belief appear to be that the disease has been somewhat irregular and atypical, and that the Pfeiffer influenza bacillus has not been demonstrated in the cases examined.

We think the disease is grip, and will briefly give our reasons. No practitioner of some years' standing, will probably deny that there appeared about seven years ago a new disease, characterized by sudden onset, severe aching, deep-seated pains in various parts of the body, prostration and usually an inflammation of the respiratory, and sometimes of the digestive systems. Sometimes the disease seemed to confine itslf to the nervous system. It was furthermore characterized by its short duration, rather disproportionate to its severity, by the extreme weakness that it left behind, by the number of its sequelae, and by its intense contagiousness. Older practitioners recognized it as a disease that under the name of grip or influenza had prevailed some years previously and then disappeared.

It seems to us that the present epidemic is of a somewhat milder form than the one that appeared about seven years ago, but sufficiently resembling it to indicate that we have to do with the same pathological entity. Like ordinary colds, the disease is presumably an infective disease. As the Pfeiffer bacillus in pure cultures has not communicated the disease to animals, we cannot prove that it is the etiological factor, but if it is not one micro-organism it is another, and it is immaterial for the diagnosis of the present epidemic, whether Pfeiffer's bacillus is the cause of grip, or not.

The present epidemic is different from ordinary cold, by the above enumerated symptoms, namely, its suddenness and severity, the prostration, the intensity of the malaise, and the marked and certain contagiousness.

If we should deny ourselves the right to give a disease a proper name, and recognize it as a pathological entity before we had made sure of its etiological factor, our nomenclature would be very limited. Clinical symptoms differentiate our present epidemic from those diseases that we by perhaps an unfortunate collective name have called colds, and in spite of the high authority of our Eastern colleague, we shall not consent to call it "a cold," but will maintain that it is substantially identical with the grip.

THE SPITTING NUISANCE.

The ladies of the Improvement League of this city are making a strong and praiseworthy effort to have an ordinance passed by the City Council for the prevention of spitting in hallways and stairways of public buildings and upon the sidewalks of streets or avenues. The habit of expectorating, with or without the adjunct of tobacco juice, is not only a disgusting nuisance but a menace to the public health. The more we study tuberculosis the more we are convinced of its prevalence either apparent or latent. Schlenker examined 100 bodies of adults and children giving special attention to the lungs, the mesenteric, bronchial and cervical glands; of the total number 66 were found to be tuberculous and of these, tuberculosis was the cause of death in 53 per cent, was of great importance in

6 per cent., and was latent in 41 per cent. Had a microscopical examination been made it is probable the figures would be still more startling. Tuberculin is the most accurate test for tuberculosis and the results obtained by Kossel are full of significance. He tested, under Koch's special direction, 2459 children in Berlin and found that they reacted to the old tuberculin. In only four of these was tuberculosis apparent; in all other cases it was latent. Kossel estimated that 40 per cent of city children secrete the tubercle bacillus from some part of the body. It is generally agreed that tuberculosis is present in two-thirds of mankind.

Another point which bears directly upon the question at issue is that the disease is chiefly conveyed by the dried and disseminated sputum. The sputum of a phthisical subject is practically a pure culture of the tubercle bacillus. Diluted 1 :400,000 times it is still capable of propagating the disease in the bodies of rabbits and guinea pigs. The experiments of Corvet are very instructive. He collected the dust of walls, ceilings furniture, etc., and observing every precaution succeeded in propagating the disease in two third of the animals into whose bodies the cultures from the dust were injected. Railway sleeping cars, steamboat staterooms and the cells of prisons are almost sure to be infected with the tubercle bacilli. The criminal who receives a life sentence is thereby practically condemned to die of tuberculosis. The sputum which is thrown upon the floors and stairways of public buildings, or upon the sidewalks of streets soon becomes dry and is disseminated in the form of dust and at once becomes a source of danger; and since two out of every three persons who commit this nuisance are the subjects of tuberculosis, either apparent or latent, the risk is by no means a trifling one.

The great problem of the incoming century will be the stamping out of tuberculosis and every effort directed against the deadly bacilli will count towards the solution of this problem. The ordinance asked for by the Improvement League is not an innovation. A similar ordinance has for some time been operative in Los Angeles, California, Salt Lake City, Utah, and Rochester, New York, and so far as can be learned the results are gratifying.

Since the above was written the ordinance has been passed by the Minneapolis City Council.

EXPERT TESTIMONY.

Expert testimony, and especially medical testimony, has fallen into disrepute, and justly so in many instances on account of the way it has been sometimes procured and used in the courts; and yet it has been the desire of all right minded and competent men to free testimony from bias and all other difficulties as much as possible. Many suggestions have been made for legal enactments that, in some manner, might promote justice and save such testimony from the farcical results not unfrequently witnessed in trials of cases both civil and criminal. But on investigation difficulties are met in these efforts to frame laws touching such matters that appear well nigh insurmountable when the rights of all parties concerned must be protected. As a result of a discussion on these matters before the International Medico-Legal Congress in New York, the following draft of a proposed law was prepared by Regent Foster, Esq., of New York city, in conference with Judge L. A. Emery, of Maine, and has been submitted for criticism.

AN ACT IN RELATION TO EXPERT TESTIMONY:—Section 1st. "When in any civil or criminal proceeding it appears that the testimony of skilled experts may aid in determining any issues of fact, any justice of the Court in which proceeding is pending may upon application of either party and after reasonable notice and hearing, appoint one or more skilled experts and make such reasonable examinations and tests in relation to the personal thing or subject matter involved as either party may request."

Section 2d. "Such expert may be examined as a witness at the trial by either party or by the Court, and shall receive for his services and for his attendance at court a reasonable sum to be fixed by the Court and paid by the party making the application and be taxed in his costs if he recovers."

To the suggestion in the above law there will be the objection that the judge in any case should be made a party to either side in the trial, or to be involved in any way except as a presiding justice: and it is not desirable that such additional responsibilities as the selecting of experts be thrust upon his honor, even if such a law could be made constitutional under our present organizations as states. If the opposing counsel could agree with the judge as to the experts to be called it would be well; but under such circum-

stances a legal enactment would not be necessary.

It has also been suggested that a certain number of qualified experts be appointed by the governor, or designated by some other legislative power, to act in that capacity both in civil and criminal cases, who should be called upon by parties seeking such services. This would confine litigants to certain individuals alone for testimony and advice which would be a restraint on liberty of choice hardly compatible with our ideas of freedom and fairness, even if such a law could be framed and held as constitutional.

If expert witnesses could be summoned by both parties to testify on questions in litigation, as they have been in some instances in criminal cases, it would free them from all suspicion of bias, and then the slight differences of opinion would not be magnified as they now are by counsel to sustain the merits of their views and disparage those of their opponents. Experts, the most experienced of them, can honestly differ in their opinions as to the interpretation of facts concerning which time alone may determine which is correct; and why should such disagreements create any surprise, or reflect in any way on their truthfulness or integrity? The most eminent lawyers differ in their interpretation of points of law which are often decided by the number of precedents only. In imitation of such decisions juries have sometimes decided cases, apparently, by a preponderance of numbers of witnesses without regard to their natural ability, qualifications, or previous training in the matters concernng which they are called to testify.

The second section of the above draft of a law is one of very great importance, and would go far to simplify the trial of all of this class of cases. It would place all expert witnesses on the same level as to any bias on account of pecuniary compensation and would have a good effect on the minds of the jury on that account. The force and bearing of such a law may be aptly illustrated by a scene in court when the late distinguished expert, Dr. John P. Gray, was a witness and under cross-examination. The lawyer, thinking to belittle or weaken the testimony of the doctor, assuming his fiercest manner, asked him, "How much have you been paid for giving this testimony?" The Doctor calmly replied, "I have not been paid anything; but I expect to be paid what the court allows me." The baffled counsellor asked again,—"Do you mean to say you have not been paid five hundred dollars for your services in this case?" The still undisturbed doctor quietly said, "I mean to state just what I said before, that I have not yet been paid anything; but expect to be paid what the Court allows me."

Such arrangements between counsel and witnesses, and known to be established by law, would have a salutary effect upon the minds of the juries, and all parties interested in the cases.

REPORTS OF SOCIETIES.

Hennepin County Medical Society.

The semi-annual meeting of the Hennepin County Medical Society was held at the Public Library in Minneapolis on Monday evening, Dec. 5th—the president, Dr. Nippert, in the chair.

Dr. Cutts, vice president of the society, delivered the semi-annual address on "The Second Stage of Labor and Some of the Injuries to the Parturient Canal"—See page 37.

Discussion.—Dr. A. B. Cates considered the method of Painter, recommended by the author of the paper the best means of saving the perineum. The lateral position with the left arm of the operator between the thighs and the parts in full view gave almost complete control of the head, and thus prevented its too constant or forcible pressure upon the perineum. Chloroform was necessary as it relaxes the tissues, and keeps the patient from bearing down during the pains. This method however does not apply to forceps cases. In this country the dorsal position is chosen and the forceps are removed as soon as the perinium is stretched. The finger should then be passed into the rectum until the chin of the fetus is felt while the thumb controls the head. The finger should be covered with a rubber cot. In spite of all these methods a large number of lacerations will occur. When he saw that a tear was inevitable he thought it much better surgery to divide the perineum in the middle line with a curved probe-pointed bistoury, thus making a clean incision which is much more likely to heal by first intention than a lacerated wound.

Dr. C. G. Weston had been in the habit of using the method, but had not been so fortunate as the author of the paper. He could not believe that laceration was avoidable in all cases, nor could he agree with the statement that there was no danger until the operator could get his finger behind the orbital ridge and draw the head forward.

Dr. W. A. Hall thought the whole secret of success lay in preventing over distention. With the fingers over the occiput the head could be held back during the pains until by gradual dilation the outlet became large enough to allow the head to pass through without producing a

tear. He approved the plan of delivering the head with as little distension as possible.

Dr. H. B. Sweetser believed a combination of circumstances acted as a safeguard to the perineum. Chloroform was a powerful factor.. The head receded greatly during the intervals between pains thus allowing the circulation to return to the parts which suffered pressure. In primiparae the danger is largely due to the great power of the uterus in pushing the fetus onward. He has never felt that his hand was strong enough to get absolute control over the fetal head. Ordinarily the laceration did not extend into the rectum and could be easily repaired, but in the abnormal position, of the occipito-posterior presentation the matter was more serious on account of the sloughing which was almost sure to follow, and sloughing might occur even when there was no visible tear.

Dr. A. W. Abbott said it was not the strong muscular woman who suffered rupture but the relaxed and non-muscular. Of late years he made no vaginal examinations, avoided interference with the perineum and applied forceps without introducing his fingers into the vagina. He believed if statistics were available they would show that such methods as are employed to protect the perineum are not only useless but harmful, as they only produce irritation and bring on pains. If the Almighty had intended to have the assistance of a doctor in this emergency He would have arranged in some way to have one there every time. An examination should be made a month before confinement and the accoucheur would thus be prepared for any emergency.

Dr. Benjamin did not think the management of the case had so much to do with the result as the disposition of the patient. Some are contented and patiently allow the labor to take its course; others are nervous and anxious to get rid of their sufferings; the latter are the most liable to rupture. If time is allowed, chloroform wisely given and nothing else done, he believed few lacerations would take place.

Dr. Chapman was surprised at the inference that laceration is the fault of the attending physician and that the public would become educated to this belief. In the earlier years of his practice he congratulated himself that he had avoided tears, but now he believed it was due rather to the strength of the women than to his efforts.

Dr. J. W. Dudley wished to correct the statement that the lateral position usually adopted in parturition, is the same as the Sim's position. The entrance of air into the uterus may account for some cases of sudden death. To prevent the possibility of such an accident the hand of the accoucheur should be placed over the fundus uteri as soon as the fetal head is delivered. The routine treatment in Boston is to hold the hand in that position for three quarters of an hour.

Dr. Mary Whetstone avoided chloroform on account of its predisposing to post-partum hemorrhage. She thought the dorsal position the natural one and superior to the left lateral.

Dr. Cockburn preferred the dorsal position. He did not depend much upon chloroform. If anesthesia is not complete the expulsive power is increased, and the patient partially relieved of pain makes more vigorous efforts which increase the risk of laceration. He regretted that laceration of the cervix did not find a place in the paper.

Dr. Cotton had often been called too late to control the case, had observed the worst tears in muscular women who were unruly and would not obey instructions not to strain.

Dr. Nippert, the president, thought that chloroform to its full extent is most effectual in preventing laceration. He would advise the use of an ointment to the perineum for months before confinement, Lanoline one ounce and Borax grains ten.

In closing the discussion Dr. Cutts did not think all lacerations could be prevented, but instead of having 30 or 40 per cent. it would be reasonable to expect the ratio to be reduced to 10 per cent. Pressure upon the perineum is to be condemned for it shuts off the circulation; pushing back the fetal head is a different matter. He does not approve of episiotomy.

Dr. Woodard read a paper on the "Medical Treatment of Dysmennorrhea."

For giving temporary relief the author condemned the use of opiates. Chloral and the bromides were useful under proper restriction. In plethoric subjects viburnum prunifolium was recommended in one drachm doses for five days before and during the menstrual period. When chlorosis is present iron, arsenic, and strychnine are the best remedies. In the rheumatic, phenacetine or acetanelid is indicated. He found apiol in five grain capsules night and morning of especial value. In using the galvanic current he recommended placing the negative electrode in contact with the cervix, and the positive over the sacrum; or the negative might be used intrauterine and the positive over the epigastrium. Particular attention should be given to hygienic measures and a sea voyage was highly commended.

Discussion: Dr. Staples advises rest in bed and saline cathartics, and sends patients to the sea-shore where he employs sea-bathing with success. Calisthenics are valuable.

Dr. Hirschfield had never seen a cure by exclusively medical treatment: he thought viburnum almost a specific in nervous cases.

Dr. Whetstone had been very successful in nervous cases by changing the patient's habits. She prescribes the bicycle.

Dr. Cates thought dress the most important factor in the production of dysmennorrhea; skirts must not hang from the waist and the intestines must not be forced down upon the womb.

Dr. Abbott said the subject is not well treated in books. We do not know the pathology of abnormal menstruation. The difficulty of research is too great and the pathology will not soon be understood. Stenosis and anteflexion are not responsible. Inflammatory cases are not troubled with dysmennorrhea. The symptoms vary widely, in 3000 case records, as to nature and location of pain. Looseness of bowels and frequency of micturition and other reflex symptoms are frequent. Treatment must be systematic but cannot be scientific without a basis of scientific knowledge. Surgical treatment is often useless and will in future be much less often resorted to. As to membranous dysmennorrhea, he had made microscopical examination of every case occuring in his practice and found the supposed membrane to be a clot in every instance. In certain cases due to lack of development he had found ovarian substance very useful.

Dr. Benjamin said the early care of girls is important. They should be watched and instructed; dress is an important factor. Corsets and constricting bands should be discarded.

Dr. Thomas remarked that, in the anaemic, pain is more severely felt than in others; general improvement of health is followed by relief of menstrual symptoms. One case treated by massage improved rapidly. Mathews Duncan uses guaiac with success. Spasmodic dysmennorrhea is possible.

Dr. Haggard said those who believe in spasmodic and obstructive dysmennorrhea have made viburnum popular. Caulophyllum allays pain in congestive cases.

Dr. Woodard in closing did not claim radical cures from medical treatment; but as many can be cured by medicine as by surgery. Dress is especially important. Spasmodic contractions cause the pain in many cases, and may be relieved by the viburnum compounds.

GRIP IN THE EAST.

While Minneapolis is passing through a mild epidemic of Grip, the eastern cities are suffering severely. The figures for Dec. 21st are as follows:

City.	Cases.
New York	125,000
Philadelphia	50,000
Baltimore	40,000
Dayton, O.	5,000
New Haven	5,000
Yale College	400
Total	225,400

BACTERIA.

If bacteria are roaming about at kissing time a sufficient number might be collected at the Hobson receptions to satisfy one Lawson Tait, who wanted enough to make a poultice as a dressing for a wound.

FROM AN ANCIENT WRITING.

"Quod ali cibus est,
Aliis fuat acre venenum."

Progress of Medicine.

MEDICINE.

UNDER THE CHARGE OF
J. W. BELL, M. D., C. H. HUNTER, A. M., M. D.
J. H. STUART, A. M., M. D.
DAVID OWEN THOMAS, M. D., M. R. C. S.

HOW MALARIA IS CONTRACTED.

There has been considerable controversy during this decade as to the special vehicle of malarial infection. After giving an interesting resume of the prevailing theories (London Lancet Dec 3d, 1898) Dr. Amico Bignami, of Rome reports a successful inoculation of malaria with mosquitos. He says that until lately malaria was supposed to be contracted through the agency of water and air; but it has been shown that drinking water could not be the vehicle of infection because Celli and other observers demonstrated that malaria was contracted on the Roman Campagna where the drinking-water was as pure as that of non-malarial neighborhoods.

It has been more difficult to disprove the instrumentality of air in the transmission of malaria. The air and soil have been considered as the sources of the infection by many Epidemiologists. Dr. Bignami had previously dealt with the hypothesis that the malarial hematozoon exists in a free state and resists dessication and pointed out that "Malaria does not comport itself in the least degree like a disease due to inhalation of dust." He showed that the theory of the passage of the malarial germs from the moist earth to the ground air encounters inexplicable difficulties. If the air were a source of infection then we would expect malaria to be transported by the wind beyond the malarious region, and the malarious load carried by the atmosphere should not vary notably at different hours of the day.

The unsatisfactory character of these hypotheses led the Dr. to consider the possibility of malaria being due to inoculation by Mosquitoes. If this theory were correct it was at once plain why malaria is not diffused by the wind, and why the disease is more easily contracted morning and evening, and that it does not prevail in high altitudes, but often manifests itself after sleeping in a malarious locality. It had been previously surmised by different observers that mosquitoes might be connected with the life history of the malarial parasite, but until lately it was thought that their agency was the same as in filaria disease and not by inoculation. After recounting many difficulties in the experimentation with mosquitoes the Doctor states that in August of this year three persons submitted themselves voluntarily for the experiment. They were placed in specially prepared rooms (having

gauze-covered windows) and exposed during the night to adult mosquitoes brought from malarial districts. The days were passed in a hospital ward. Thus making the experiment similar to successive night exposure in a malarious region. The experiment was successful but the details of the inoculation are reserved for another paper. D. O. T.

THE TREATMENT OF WHOOPING COUGH.

Dr. G. Arbour Stephens reports some startling results in the treatment of Whooping-cough (London Lancet, Dec. 3d, 1898.) He states that having an attack of pharyngitis he found that tickling his own external auditory meatus produced a cough with the characteristic "whoop." This led him to examine the ears of whooping-cough patients and he found almost invaribly that their ears were tender and that owing to the pain their mothers were not allowed to wash the organs, or there was a semi-fluid discharge present which in some cases had existed for some time. This induced him to institute the following local treatment. The ears were syringed out night and morning with lukewarm boric lotion, or warm water. Then the meatus and tympanum were painted with the following:

Cocaine Hydrochlo gr. XXIII
Glycerine drachms III
Hydrarg. Perchlor. Sol. m—XX
Aqua. g. s. ounce I, Misce.

In every case the patient was benefitted and the whooping-cough ceased. However the bronchitis, laryngitis, and pharyngitis, accompanying the disease did not disappear. He observes that whooping-cough frequently follows in the wake of measles, and that the ears frequently discharge. He reported eight cases treated and cured in three to six days. As a basis for the treatment he says, "As an explanation of the pathology of these cases I consider that there is a small local inflammation in the meatus starting independently of or succeeding to an attack of measles, and that this inflammation irritates the nerve filaments which are connected with the root ganglion of the vagus, and so stimulates the vagus itself in some or all of its branches." D. O. T.

COMMON ERRORS IN THE MANAGEMENT OF TUBERCULAR PATIENTS.

The papers read, and the discussions had on the subject of Tuberculosis at the late meeting of the American Climatological Association held last fall in the White Mountains, as reported in the Boston Medical and Surgical Journal, Nov. 17, 1898, are of great interest and importance. Dr. Frederick I. Knight, of Boston, read a paper on the "Common Errors of General Practitioners in Dealing with Cases of Pulmonary Tuberculosis."

1. The first error noted is the failure to make an early diagnosis. This is not usually difficult since the discovery of the tubercle bacillus. A failure to make it may be very serious because it is especially true of this disease that the earlier its presence is discovered, the more amenable it is to treatment, whereas if there is delay and secondary infections have taken place there is not much chance of restoring the patient's health.

The most striking results of treatment of this disease in the great open health resorts and also in sanitaria are patients who have really never appeared as invalids.

One reason of this error is that the patient naturally makes light of his first symptoms, and contents himself perhaps with asking the doctor on the street for a prescription for a cough which he regards as trifling, and thus an examination is not had until the patient looks and feels sick.

Another reason, the physician himself, for obvious reasons, may shrink from the knowledge of the results of a careful physical examination. On the other hand any cough should necessitate frequent examination of the chest and fever tests, especially if there be hemoptysis.

2. A second error is the failure to admit the gravity of the situation the moment it is discovered, and to put the patient at once in the best possible condition for recovery. It is better as a rule, that the patient also should be fully informed of the gravity of the situation, as in this way only will he give thorough co-operation in the effort for his recovery. Of course he should be fully impressed with the hope of recovery if the proper course is pursued.

3. A third error is, while temporizing, in recommending treatment not only useless, but positively injurious—giving medicines which take away the appetite and interfere otherwise with digestion, does a great deal of mischief. Cough syrups, cod-liver oil and creosote do a large share in hastening the decline of patients. I do not mean to say that cod-liver oil never does good, for there are patients who can take and assimilate it with ease, and greatly to their benefit, but it is cruel to prescribe it in a routine way without selecting cases and watching effects. Who has not many times seen patients with thickly coated tongues swallowing large doses of oil faithfully three times a day, eructating it all the time, and capable of assimilating neither that nor any other food? Neither do I deny that creosote does good in some cases in modifying the bronchial secretion and mproving digestion; but I believe that large doses as a rule take away the appetite and do more harm than good. Both it and cod-liver oil should be administered tentatively.

Another unfortunate mistake is a general unrestricted order to "drink whiskey" as a preventative. The injudicious use of alcoholics depresses the vital forces, makes the patient irritable and dissatisfied with himself and everybody else and seriously interferes with his recovery.

Patients are also injured by being told to exercise when they should be quiet, as when the fever is on.

4. A grievous error is often committed in the matter of sending patients away from home. Patients who have only a few weeks or months to live, in almost every case would be better off at home. Others are advised to change climate who cannot possibly afford to remain away from home enough to do any good.

They go away, live in miserable quarters, on poor food, and having spent all their money in a short time are obliged to return. They would have spent their little money to much better advantage at home. Insufficient care is excercised in advising patients who are able and fit to make a change, as to the selection of climate. Too often the advice is simply to "go south" or "go west." In such cases the patient flits about from one climate condition to another, without staying long enough to fully experience the modifying effect of any one, perhaps till the chance for beneficial action is past.

5. The error, a very grave one, to which I shall call attention, is allowing the patient to go without sufficient medical supervision. This disease requires constant watchfulness. A physician skilled in treating such cases is often better than the general practitioner whose attention is absorbed in critical acute cases.

Dr. Hart, of Colorado Springs in discussing this subject said:

We have a great many patients sent to Colorado who undoubtedly would be better if left at home. They arrive there after a long journey, with high temperature, sweating and so on, with every indication of advanced trouble, and in a number of instances I have found cavities, and it is a very difficult matter for the physician at the health resort to manage those cases. They do not understand why they should be sent back home because of this hopeless condition, which it invariably is." There is another class of cases which are sent out and advised to rough it, ride horse back and have a good time generally and keep away from doctors. They soon fall into the doctors hands, and having taken a wrong course there is great trouble in the management of them. Neither should the patient try to keep himself under the management of his family physician after going away. Dr. Beverly Robinson, of New York said: "With regard to the question of climate I am particularly opposed to sending a patient far away if I can find conditions near at home which will probably suit those patients about as well. I have a very doubtful mind as to the merits, in regard to curative influence, of any particular climate as opposed to any other particular climate. All the conditions involved in the selection of a particular place must be estimated and it is important to have a good physician there. The drainage of the house and the food are quite as important as the question of climate. I do not believe it is a good thing to send people so far away from home in the secondary stages."

Dr. Knight said: "The physician should appreciate the possibility of cure if he does all that is possible for his patient by an early diagnosis."

J. H. S.

SURGERY.

UNDER THE CHARGE OF

J. H. DUNN, M. D., W. A. HALL, M. D.,
KNUT HOEGH, M. D.

The Operative Surgery of Malignant Diseases.

Halstead, in an excellent article in Nov. "Annals of Surgery," reports the results of his operation for Breast Cancer from 1889 to 1898 at the Johns Hopkins Hospital; there were 133 cases operated on, 76 of them more than three years ago. There have been 9 per cent of local and 16 per cent of regionary recurrences. Of the 76 operated upon three or more years ago, 31 (or 41 per cent) are living without signs of local or metastatic recurrence. 10 died more than three years after, only one of the ten having local recurrence. Thus 40 (more than 52 per cent) have survived more than three years without signs of local or regionary recurrence. This is certainly a most remarkable showing. Many of the most experienced surgeons of the last generation doubted whether carcinoma of the breast was ever cured by operation, or life even much prolonged. However, Butlin, in his work—"The operative Surgery of Malignant Disease," published in 1887, after a careful canvass of the subject says: "I am therefore, confident that we may regard operations for the removal of mammary cancer as successful in effecting a complete cure in rather more than 10 per cent of all cases treated." This view at that time was fully as optimistic as the facts would justify. Most surgeons have only too often reason to feel discouraged with operations for malignant disease in general and with cancer of the breast in particular.

The result of Halstead's work gives the most cheering tidings for the subjects of malignant disease yet received—to have raised the percentage of cures in breast cancer, from 10 per cent to 50 per cent in a decade, is certainly rapid advancement. Of the two great factors in the success of operative cure of malignant disease, viz: early interference, and completeness of removal, the former may have played some part, but it is evident chiefly to the latter that Halstead's success must be attributed, since many of his cases were far advanced, and he makes a special plea for earlier recognition and prompt action,, by medical attendants.

It is notable that Butlin, who believed that 10 per cent could be cured, opposed removal of the

whole breast including the uninvolved skin, and especially a routine opening of the axilla—while Halstead not only adheres to his extensive operation which sacrifices not only the whole breast and its skin, but the pectoral muscles, and the axillary glands and connective tissue en masse, but has extended it now so as to clean out and strip the supra clavicular fossa as a routine. For the present he says "Operate on the neck in every case, and remove the minor as well as the major pectoral muscles."

In our present light, great responsibilities rest upon the general practitioner, viz: to early recognize and to advise prompt action, but a still greater is placed upon the surgeon who attempts this operation, viz: that of skillfully making a sufficiently radical removal. Such operations require a high degree of experience and knowledge Until recently, as a rule, the diagnosis has been made only after the disease has developed the grossest secondary changes, and then but partially removed—at first barely the tumor, then the whole breast, but leaving the skin, not visably involved. It is scarcely more than a dozen years since anything like a routine clearing of the axilla came into general vogue. Today it is demonstrated that the whole breast, its overlaying skin, axilla, pectoral muscles and supra clavicular fossa must be removed in the most careful and methodical manner, without incision or peace meal excision of the infected territory if we hope to give the patient any great prospect of cure. Only when these conditions have been most skillfully fulfilled, can the patient be said to have been given much chance of cure. According to Halstead, scientific surgery now offers the victim of mammary cancer something like even chances of being cured. In practice, between tardy diagnosis, and inefficient surgery, the general results are still, we fear, less than one cure in ten. It is sincerely to be hoped that the profession will bestir itself to make the possibilities shown by Halstead, a general actuality.

* * *

"Observations upon the Operative Treatment of Hernia, at the Hospital for Ruptured and Crippled," by Drs. Bull and Coley, (Nov. Annals of Surgery), is a valuable report. Modern Surgical Literature is somewhat open to the accusation of short sight—more deeply interested in the "successful operation" than how the subject fared ever afterward. It is, therefore, refreshing to meet with articles which deal somewhat with final results. In this case the material is large, the authors distinguished, and their observation on their face temperate.

From 1890 to 1898 there were treated at the Hospital 34,272 cases of rupture as folows:—

Inguinal,	male 24810;	female 4082=	28892
Femoral,	male 558;	female 1360=	1927
Umbilical,	male 1078;	female 1717=	2795
Ventral,	male 229;	female 429=	658

There were 340 ventral herniae, due to laparatomy: 61 followed appendectomy; 25 followed Alexander operations. The histories indicated that most of these cases had healed by granulation and emphasize the importance of primary healing in hernia operations. Of 917 cases submitted to operation for radical cure there were five deaths (two-fifths of one per cent—486 were well, upwards of 1 year; 296 were traced and found free of recurrence for periods of from two to seven years. Various methods were used in different series of cases, but that of Bassini gave the best results—12 known relapses in 618 cases. They regard the free cutting of the internal oblique in Halstead's operation as a serious objection to that method. In Coley's last series of cases (531) primary union was secured in 95.5 per cent. The authors conclude among other things that hernia can be secured for a considerable period at least by operation. The proportion of permanent cures cannot as yet be set beyond which relapse may not take place, but their studies of 360 relapsed cases throw considerable light upon the question. 80 per cent of the relapses occurred within one year and 64.5 per cent during the first eight months following operation, while less than 12 per cent occurred after two years had elapsed. Hence if a hernia is sound one year after operation, there is reasonable prospect of permanent cure, while if it remains well for two years, the chances of relapse are very small, though possible as late as 20 years after operation. J. H. D.

GYNECOLOGY.

UNDER THE CHARGE OF

A. W. Abbott, M. D., F. A. Dunsmoor, M. D.,
J. H. Rishmiller, M. D.

GESTATION FOLLOWING TRANSPLANTATION OF THE OVARIES.

Dr. Grigorieff (Cent fur Gyn. No. 22, 1897) prolixly reports some unique experiments with rabbits in which he excised the ovaries and then transplanted them either near the uterine cornua in the broad ligaments or even at distant sites in pockets formed in the peritoneum. The rabbits were killed six months later after they had become pregnant. Accurate studies were made of the gross and microscopal anatomy of the pelvic organs. His observations conclusively demonstrate in each case that no ovarian tissue remained at the site of the original implantation of the ovary. The author arrived at the following conclusions:

First—The favorable results obtained are largely to be attributed to the scrupulous aseptic technique observed during the experiments.

Second—The ovary continues to develop at the site of implantation and any part of the pelvic peritoneum may be selected for the transplantation.

Third—The follicles undergo the usual course of development such as observed in the normally situated ovary.

Fourth—Single follicles mature and rupture while the corpora lutea are formed in a perfectly normal manner.

Fifth—After transplantation of the ovary gestation may occur and continue to full term.

MYOMATA OF THE LARGE INTESTINE.

Pfanneustiel (Cent fur Gyn. No. 30, 1898) details the clinical history of a patient who entered the hospital on account of progressive emaciation and incontinence of urine. The author found the pelvis filled by a smooth, hard and firmly adherent neoplasm which dislocated the uterus and bladder upwards A similar tumor, the size of a child's head, lay above and to the right of the symphysis. After distending the rectum with gas he was able to make out that the tumor was retro-intestinal. He performed coeliotomy and found the upper enlargement to lie behind the descending colon which he enucleated by splitting the mesentary. The neoplasm was firmly attached to the posterior surface of the colon by a fleshy pedicle which was then ligated and severed with the Paquelin cautery. The peritoneum was sutured over the stump. The intra-pelvic neoplasm was removed with greater difficulty. After incising the posterior layer of the left broad ligament, the pararectal tissue was divided with the cautery. The growth was then seized with a volsella and forcibly drawn upwards, being enucleated partly with the finger and partly with the cautery. The cavity thus created was drained per vaginum. The uterus and rectum were sutured together and in this manner shut off from the abdominal cavity.

Microscopic examinations demonstrated that the removed neoplasms were myomata and revealed no trace of saraomatous degeneration. The writer summarizes that the neoplasms must have developed from the mucous membranes of the intestine.

SEPARATION OF ABDOMINAL WOUND AFTER COELIOTOMY.

Dr. Oscar Beuttner (Cent. fur Gyn. No. 22, 1897) reports an interesting case illustrating the disadvantages of catgut sutures. The patient was a multipara, 35 years old; he performed coeliotomy for fibromyoma complicating gestation-advanced to five months. The incision was in the alba and the muscles much atrophied. The peritoneum, muscles, facia and skin were closed separately with continuous catgut sutures. Additional catgut sutures were passed through the entire thickness of the abdominal walls. On the ninth day after the operation the deep sutures were removed and prima intentio observed. Soon after the patient was seized with a paroxysm of coughing which finallly burst open the abdominal wound to the extent of 8-10 cm. This permitted the escape of the coils of intestine which were found adherent to one another and to the parietes by recent bands. The intestines were irrigated with a saline solution and returned to the cavity. The coeliotomy wound, after refreshing the edges, was closed with ten through and through silk sutures. The patient then made an uneventful recovery.

PEDIATRICS.

UNDER THE CHARGE OF
H. B. SWEETSER, M. D.

HEREDITARY SYPHILIS.

L. Duncan Bulkley, (Jour. Am. Med. Ass., Nov. 5, 1898), has written an interesting article on this subject.

The period at whch symptoms manifest themselves in children born apparently healthy varies from a few hours to several months after birth, the exact distal limit being as yet a "mooted question." Most writers believe that one year is the outside possible limit at which the first symptoms appear, and that it is more than likely that, in cases where the initial symptoms appeared only after several years, the earlier manifestations had been overlooked. At any rate in over three-quarters of the cases, the disease asserts itself within the first three months of life; while beyond six months the proportion is exceedingly small. Yet it is never safe to give an absolutely favorable prognosis as to escape of the child until after one year old. In considering the relations of syphilitic children to the rest of the community, the author has this comment: The oft quoted saying of Fournier that "nothing is so dangerous to its surroundings as a syphilitic child," should always be borne in mind in connection with every case of hereditary syphilis. Hundreds and thousands of cases of syphilis have had their origin in innocent babes, and too great care can hardly be exercised.

A child of parents with recent syphilis, even if apparently healthy, should never be wet-nursed, because there is no certainty that at some time mucous patches in the mouth may not develop and thus infect the nurse.

Not only the immediate attendant but everyone who comes in contact with the syphilitic child is in more or less danger of infection, dependent on the amount of care exercised. It must be especially remembered that the glairy secretion from the softened papules on the skin and the secretion from the mucous patches in the mouth are very highly contagious, and that thereby danger may arise from the nursing bottles, dishes, cooking utensils, cloths, etc.

The Treatment of Hereditary Syphilis is dealt with it by Dr. Chas. S. Shaw. (Jour. Am. Med. Ass., Nov. 5, 1898.)

He states that in the infant we are, as a rule, called upon to treat only the secondary stage, for the reason that the teritary stage is rarely reached because of the slight resisting powers which lead to death from malnutrition. In making a prognosis he is justly and chiefly influenced by the child's capacity to assimilate nourishment. Concerning the treatment he says: "Whereas the value of mercury in adult syphilis does not admit of question, in infantile syphilis it is unique, it is the only drug. The iodides, arsenic and iron, so valuable in the treatment of the sequelae in the adult, have little place with infants, because with them this stage is seldom reached. Mercury in some form is a sine qua non. It is a question, therefore, only of choice of preparation and method of administration." Of the four ways of giving mercury—by mouth, by hypodermic injection, by vaporization and by inunction—he very strongly urges the method by inunction in infants, because of the importance of conserving the feeble digestive and assimilative capacity. Under certain urgent conditions, when it is necessray to quickly and powerfully impress the system, he admits it may be advisable to have temporary recourse to the other three methods, but for persistent, systematic treatment he lays down the following axiom: There are two ways of treating infantile syphilis, a right way and a wrong way; the right way is by mercurial inunction, the wrong way is any other way.

The eligible preparations are the unguentum hydrargyri and the 10 per cent. oleate (both officinal), diluted one-half with lard, lanoline, etc, to prevent irritation of skin.

The method is simple: Spread about one drachm of ointment on a piece of cloth, lay on abdomen, and cover with binder; every second day bathe child and reapply.

TETANY IN INFANCY.

John Lovett Morse, (Jour. Amer. Med. Ass., Nov. 5, 1898), gives his views on the treatment of tetany in infants.

Since all the available evidence as to the origin and nature of tetany seems to show that the disease is due to toxic poisoning of some sort, treatment may be directed to the prevention of the formation of toxic substances and to their elimination if already formed. It is probable that many of these toxins are absorbed from the alimentary tract and some from the respiratory. Others may be the resultof abnormal metabolism. Regulation of the diet is probably the most important method of preventive treatment, although intestinal antiseptics may be of some value and deserve a trial. The formation and absorption of respiratory toxins can be best prevented by a liberal supply of fresh air and sunlight. Anything which tends to improve the hygienic surroundings is of use.

Elimination is sought through the intestinal tract, and to a less extent through the kidneys and skin. Emetics, purgatives, and lavage of stomach and colon tend to favor elimination and prevent absorption. A liberal supply of water will keep the kidneys active. The skin may be stimulated by proper hygienic measures.

Symptomatic treatment is also important, and consists largely in the avoidance of excitants to spasm and in the employment of antispasmodics, as bromides, chloral, belladonna, opium, etc.

AXIOMS IN INFANT FEEDING.

1. The food must contain all the constituents and in the same proportion as found in mother's milk.

2. It must be administered in a form suitable to the physiological requirements of infant digestion.

3. The total quantity in 24 hours must be such as to represent the nutritive value of one to three pints of human milk, according to age.

4. It must not be purely vegetable, but must contain a large proportion of animal matter.

5. It must be free from taint of decomposition or pathogenic organisms.

CYCLING AND THE ACTION OF THE HEART.

Dr. M. Mendelsohn, Pediatrics, Sept. 15, 1898, in the Berlin Medical Society made the following note-worthy statement upon this subject: The effect which wheeling may have on the blood pressure and thereby on the heart itself is of the greatest importance. In his own practice, as well as that of Professor Oertel's, a large number of observations were made in which an unfavorable influence on the heart was caused by wheeling. The relaxation and functional debility of the cardiac muscle was easily demonstrated, and the number of sudden deaths during wheeling is increasing, due to cardiac strain. As another warning against the excessive use of the wheel, especially in childhood, we may mention the observations in France during the yearly enlistment of recruits. It was found that a large percentage of those recruits who were expert wheelmen, had to be declared unfit for military duty on account of morbid changes in the heart muscle, or from the occurrence of marked changes in the spinal column, thorax, etc.

[The above, of course, can only be true of the abuse of bicycling, but should warn us that, especially in children, careful supervision is necessary, as to correct position, speed and distance.

Deaths from serpent bites, in India, are yearly decreasing, and yet the statistics for 1806 show that 1,132 persons died from the effects of snake bites, while 291 were killed by tigers and other wild animals.

Neurology and Psychiatry.

UNDER THE CHARGE OF
R. O. BEARD, M. D., W. A. JONES, M. D.

NEUROLOGY.

The December issue of the Journal of Nervous and Mental Diseases has an interesting article by Dr. Frank Hallock entitled "A case of Huntington's Chorea" with remarks upon the propriety of naming the disease "Dementia Choreica."

The chief interest of the case lies in the carefully given history showing that the mental symptoms preceded by several years the onset of the chorea. These symptoms began with mild depression and lack of confidence in herself, accompanied by mental confusion and bewilderment, and increased to the point of childishness in her interest and pleasure in little matters. Together with the beginning mental change appeared a rythmical movement of the thumbs. The first decided choreaform movements began fully five years after the mental change, and progressed steadily until two later they involved all the muscles of the body, including eyeball, tongue, pharynx, larynx, and diaphragm. Hallock compares this case with those of convulsive tic, and urges, first, that the motor activity is the outward expression of the state of the motor centres; secondly, that these centres are intimately connected by association fibres with those of higher consciousness and therefore, there is good reason to believe that whenever we find distinct and permanent motor disturbance of the cerebral organ, we may also expect to meet a certain grade of mental deficiency or impairment

This same magazine also contains two articles showing the difficulty which may sometimes arise in differentiating between cerebral symptoms due to anæmia or chlorosis and those due to brain tumor. The first is on chrorosis and retino-papillitis, by Dr. H. M. Bannister, and gives the case of a young woman twenty-one years of age who was suddenly attacked with severe headache on the right side, accompanied by nausea and vomiting of cerebral type and by pronounced photophobia. Her family history was good and she had always been well until two weeks previously, when she had found herself rather more easily fatigued than usual. A careful examination showed all organs to be normal, but the blood count gave the red corpuscles three million two hundred and forty-four thousand, and haemoglobin forty-five per cent. The patient later developed regino-papillitis, but under treatment of arsenic and iron made a good recovery.

The second paper on this subject is by Dr. Hugh Patrick, entitled "Brain Tumor Simulated by Anaemia," and recounts two cases, of which the case of anaemia was apparently one of tumor, the case of tumor apparently one of anaemia. The first was a domestic twenty-one years of age who for six weeks had been suffering from constant and severe headache of greatest intensity in the left temple and supra-orbital regions. With this she had been troubled with numerous momentary attacks of blindness and complained of dizziness. There was also present intense double choked disk, with some small retinal hemorrhage. Vision was reduced to 20-60 in either eye and the visual fields were notably, though not markedly, contracted. This patient also made a good recovery on iron and arsenic.

The second case was that of a married woman of thirty-two, who for three or four years had been disabled from pelvic inflammation, but was finally fully relieved by an operation. About this time she began to suffer greatly from almost constant headaches, to which was soon added occasional vomiting, and left internal strasbismus. Four weeks later when first seen, she was very pale, thin and weak, but examination of the blood showed it to be practically normal, and there was nothing to indicate disease of the thoracic or abdominal organs. The intense cephalalgia, pronounced paresis (almost paralysis) of the left abducens, typical choked disk, dizziness, a history of two abortive or atypical fits, slight difference in the knee jerks and the patient's complaint of a weakness in one leg, pointed to the existence of a brain tumor.

Dr. Marlsham Sterritt and Dr. James Stewart, (British Medical Journal, October 1st) describe a sleep of fifty days which occurred in a lad of seventeen years. There was nothing in any way suggestive of catalepsy and the sleep was at no time so profound but that he could be aroused to take food. At the end of two months his weight began to increase with slow but steady improvement. Four months from the time the sleep ended he was somewhat unsteady in gait, but there is no evidence of mental impairment.

W. A. J.

Eye, Ear, Nose and Throat.

UNDER THE CHARGE OF
J. D. SIMPSON, M. D.

THE OPERATIVE TREATMENT OF PHARYNGEAL ADENOIDS.

Dr. H. V. Wurdemann (The Laryngoscope. November, 1898), after having operated upon 189 cases for the removal of Pharyngial Adenoids, arrives at the following conclusions:

"The results of these operations are usually immediate. The pernicious habit of mouth-breathing is rapidly overcome and the benefit of free nasal respiration and drainage is soon evinced by improvement of facial appearance. the dull, stupid look disappearing and the children becoming bright looking and more intelligent. The air being warm and purified, the tendency towards colds and catarrhal affections is

lessened, and, as it is known that many infectious diseases in children are acquired through the upper air passages, the liability to infection is lessened and many attacks of sickness are escaped. If the deformity of chicken-breast has already been established, it is soon corrected through the proper breathing obtained. The respiration being deepened, the blood and tissues are more thoroughly oxygenated, and the children rapidly gain in health and weight.•

"One of the principal reasons why the aurist is consulted in children having this condition is on acocunt of deafness. This is due to obstruction of the Eustachian tubes. Subacute and chronic aural catarrh, with deafness, tinnitus, earache and vertigo in children is most commonly caused by obstruction of the Eustachian tubes, due to adenoid disease in the upper part of the pharynx, and is rapidly cured by removal of the obstruction and a few subsquent inflations wtih the Politzer bag. Many cases of acute and chronic suppurative disease of the middle ear, with perforation of the drum-head, have their origin in the infection from obstruction by pharyngeal adenoids, and a cure cannot be obtained by local ear treatment without removal of the cause.

"There are few children of tender years who have nasal catarrh. The so-called catarrh is generally in the naso-pharynx and is due to adenoids, which after removal in very young children need no further attention; but in older persons subsequent treatment is necessary.

"I have had no unpleasant complications. There have been no cases of suppurative otitis media following any of my operations. I have seen and subsequently treated two such cases occurring after operation by other men whose standing, however, should allow of no criticism. In a small percentage of cases there has been slight fever for one or two days after the operation due to slight infection, and in these there has been delayed healing; but in no case has there been any unpleasant symptoms after a week. As far as can be ascertained there have been only those instances where the growth has been sufficiently removed, or in which it has occurred in an amount large enough to warrant further operation. I have seldom made a secondary operation in cases which had previously been operated upon by others.

"The results achieved by removal of naso-pharyngeal obstruction due to adenoid growths are so brilliant, and the risks are so slight, that when indicated and properly done, there is no more successful and immediately satisfactory surgical procedure."

THE MONUMENT TO DR. HANS WILHELM MEYER.

The beautiful monument erected in honor of the late Dr. Wilhelm Meyer, the discoverer of "adenoid vegetations," was unveiled at Copenhagen Oct. 25th, 1898. Sir Felix Semon, M. D., who delivered the address, after referring to the very rare occasions upon which physicians have been "immortalized by the sculptor's art in bronze or marble in a public place," proceeded as follows:—

"What, then, has been the conspicuous merit of Hans Wilhelm Meyer, that he should have been singled out for so unusual an honor as the one which is going to be paid to his memory to-day? The answer is easily given. It is now just thirty years since he was one day consulted by a girl, aged twenty, who suffered from deafness, whose voice was most peculiar, and the expression of whose face was almost idiotic. Treatment directed to the ears and to the throat failed, and it was not until the puzzled observer one day introduced his finger into the space between the nose and throat that an unexpected solution was met with. Instead of penetrating into an open cavity, the finger was arrested by a large, soft, easily bleeding mass, a condition the existence of which in those days formed terra incognita. Meyer succeeded in removing this mass by operation, with the result that the deafness was materially improved, the voice became natural, and the idiotic expression of the face disappeared. Gratifying as this result was in itself, it was, however, only then that Meyer's real merit commenced. Schopenhauer has truly said that not he is finder of a thing who lifts it from the ground and drops it again, but he who, recognizing its value, takes it up and keeps it.

If Meyer had regarded his experience in the light of a mere pathological curiosity, again years and years might have passed before the importance of the subject was realized. But with the true instinct of the scientific observer who develops what is ultimately to become an important truth from small beginnings, Meyer did not drop the clue which a casual observation had placed in his hands. He began studying the subject in all its bearings; he examined the masses he had removed with regard to their structure; he investigated the results which obstruction of the space between the nose and throat exercised upon hearing, articulation, facial expression, general, mental and bodily development; he examined 2,000 Copenhagen school children with regard to the frequency of this affection; he made himself the apostle of his own teaching by proclaiming it not only in his own country, but also in scientific publications abroad. In one word, to such an extent did he realize the true significance of his discovery that he left to his successors merely the addition of more or less important details, whilst the foundation of the edifice erected by him has remained unchanged from the time of his own first publication of the subject.

Nevertheless, it cannot be said that this teaching at first made very rapid headway. When in 1881 he introduced a discussion on the subject at the International Medical Congress of

London it came almost—I well remember— as a novelty to many of his audience, although that was mainly composed of specialists, and it was only in the next decade that the true importance of the subject was realized throughout the world. It was at first not easy to convince the bulk of the medical profession, the parents of the mostly juvenile patients, and the schoolmasters, that a discovery had been made which, like few others in medicine, was of the utmost practical importance concerning the development of a healthy mind in a healthy body of the rising generation, and it needed the irrefutable proof of the surprising improvement seen in the subjects of successful operations to make this conviction a universal one. But truth, though slowly, ever forces its onward way, and when Meyer three years ago closed his eyes he had the satisfaction of knowing that the value of his discovery had at last been universally recognized. Already, then, the number of those who, through the timely removal of the obstructing glands, had been saved from lifelong deafness or from the lasting results of obstructed nasal respiration amounted to many thousands, and the benefits achieved through Meyer's merits will continue to accrue in future times to hundreds of thousands and millions."

THE THYROID TREATMENT OF MIDDLE-EAR DISEASES.

In view of the fact that a number of men, some of considerable prominence, have of late heralded thyroid extract as having decided curative properties in the treatment of sclerosis and some other diseased conditions of the middle-ear, Dr. Macleod Yearsley (The Journal of Laryngology, Rhinology and Ototlogy, London, November 1898) was induced to try thyroid in twenty one cases, in all of which the results from treatment were negative. After following out the recommendations and directions of those who had advocated the treatment, "even spoken eulogistically of it," and not observing the slightest improvement in a single case he writes thus;— "The natural anxiety which animates all of us in the endeavor to be conversant with the latest methods of treatment predisposes rather to an attitude of mental credulity, which is inimical to an impartial and scientific judgment. The frequency with which new methods of treatment, from which we had fondly hoped to have arrived at something like finality, although sponsored by persons of unimpeachable scientific respectability, prove on impartial investigation to fall far short of the expectations which had been legitimately raised regarding them, should lead us to adopt a scepticism which, while open to conviction, will not readily yield to mere plausable reasoning."

THE PROPER USE OF THE WORD CATARACT.

The following is an extract from a paper presented to the section of opthalmology at the last meeting of the American Medical Association by Dr. Edward Jackson. (The Journal of the American Medical Association, Sept. 24th, 1898.) "Among 10,000 patients attending my clinical services at the Philadelphia Polyclinic and the Wills' Eye Hospital, all of whom were examined opthalmoscopically, except those in whom the use of the opthalmoscope was impossible by reason of opaque media, or closure of the lids, there were 1544 over 50 years of age. Arranging these by five-year periods I find results as follows:—

	Lens Clear.	Some lens opacity.
50 to 55	460	81
55 to 60	260	50
60 to 65	196	85
65 to 70	99	83
70 to 75	60	71
Above 75	23	77
Totals	1098	449

Gould's Dictionary gives as the definition of cataract: "Diminished transparency or opacity of the crystalline lens, or of its capsule." This is substantially the definition given in other works of reference. But cataract, to the general public, means a disease of the eye leading to blindness, and only curable by a capital operation. So long as this condition was not discoverable until it had caused great impairment of vision, and was perhaps approaching the proper period for operation, the discrepancy was not great; but now that we recognize the first beginings of opacity in the crystalline lens, the use of the term "cataract" to indicate slight opacities, when it will be understood to mean early and complete blindness is seriously misleading. The introduction of the phrase "incipient cataract" is doubtless intended to meet this difficulty, but it does it very imperfectly, as must any phrase that retains the objectionable word. Many people have been rendered skeptics as to the honesty of the surgeon by a diagnosis of "cataract" which has not, after many years, been followed by blindness or any serious impairment of vision. Many have been made extremely unhappy by dread of blindness from which they were never ...ely to suffer. There has even been some confusion of thought in the profession upon the subject. I once heard a surgeon announce in a state medical society that he favored operation on cataract in all cases where the vision fell to $^{20}/_{70}$. I have known a surgeon of respectable antecedents to propose and urge such an operation for a patient who had some lens opacity but who could still see to do fine sewing and read ordinary type with either eye.

If the question of the significance of slight opacities of the lens were rarely of practical importance, this subject might not be worth discussing; but when it arises in more than three-fourths of our patients who have reached the age of 75 years, it is of great practical importance. My own custom has been not to use the word

"cataract" unless the opacity was causing serious impairment of vision, or likely to require operation. In the other cases I have informed the patient of the existence of "lens opacity," and have explained its probable significance, only speaking of "cataract" in response to some direct inquiry as to whether it or anything like it was present. I believe that such a course gives patients a far truer idea of their condition than one which calls all lens opacities "cataracts." It seems likely that some such distinction of terms will in time arise. It is probably useless to attempt by recommendation or resolution to introduce such a term; but if the need for it is clearly recognized and appreciated on the part of the profession, the differentiation of language will naturally follow."

CLINICAL MICROSCOPY.

UNDER THE CHARGE OF

J. FRANK CORBETT, M. D., G. D. HEAD, M. D.

Leucocytosis in Diphtheria.

In the May number of the Annals de L'Institut Pasteur 1898, Dr. Besredka contributes an article upon Leucocytosis in Diphtheria. His conclusions are as follows:

First, "when massive doses of diphtheria toxine are injected into rabbits the polynuclear leucocytes describe a parabolic curve reaching its maximum 12 to 16 hours after the injection; beyond this time polynuclear leucocytes decrease rapidly till death.

Second, in slow intoxication, killing in several days, the polynuclear leucocytes are always increased.

Third, in the course of immunization process a leucocytosis is manifested especially in the early hours after the injection.

Fourth, children recovering from diphtheria exhibit leucocytosis which lasts from 12 to 15 days until complete recovery.

Fifth, children who do not recover in spite of the serum treatment present in the blood only a small degree of polynuclear hyperleucocytosis.

Sixth, the degree of increase or decrease in the number of polynuclear leucocytes constitutes one of the surest elements of prognosis in diphtheria."

A criticism might be made upon conclusions one, two and three as arrived at by Besredka. In each instance the conclusion was drawn from leucocyte counts made only upon one rabbit, with no statement as to whether other rabbits were experimented with or not. The author also fails to give his method of securing the blood. If as most probable the veins of the ear were used, the enormous and repeated punctures which almost of necessity had been made in order to have secured so many counts would of themselves have caused a local inflammatory leucocytosis as great as that recorded by the author, and would throw considerable doubt upon his conclusions.

In the Berliner Klin. Wocheuschrift 1898, page 809, Pappenheim announces the finding of the smegma bacillus in sputum from human air passages. He stained a specimen of sputum after Gabbet's method and found on microscopical examination a large number of red colored bacilli which so closely resembled those of tuberculosis that this diagnosis was made. The case came to post-mortem; no tubercular lesions were found. Cover glass smears from the lung lalveoli, the mucous of the bronchi, trachea, and larynx all showed these same red staining bacilli as well as the stain which they took in sections washed in alcohol, Pappenheim comes to the conclusion that he was dealing with the smegma bacillus. No cultures were made. As a result of his study the author offers a new staining process for differentiating between the smegma and tubercle bacillus. First, stain in Carbol fuchsin heated to boiling. Second, pour off the stain in the following solution: Absalc 100 parts; Corallin 1 part; Methylene blue to saturation; Glycerine 20 parts. Fourth, wash in water. The smegma bacillus is by this method decolorized.

In connection with the findings of Pappenheim, Fraenkel in the Berliner Klin. Wochenschnft, 1898, page 880, states that he has repeatedly observed in cases of lung Gangrene the so-called Psendo tubercle bacillus in the expectoration. At first these findings had led him into error in diagnosis; but more recently he has looked upon these bacilli as harmless saprophytes belonging to the group of smegma bacilli.

These observations of Pappenheim and Fraenkel reopen the subject of a specific stain for the tubercle bacillus. Formerly it was taught that by washing the preparation in alcohol the smegma bacillus was decolorized while the tubercle bacillus was not; and this fact was given as a means of differential diagnosis between the two bacteria. But there seems to exist a growing skepticism concerning the value of this procedure. Without doubt the most certain means of differentiating between the smegma and tubercle bacillus is by animal innoculation.

G. W. H.

A medical professor quizzing his class of students on the doses of medicine to be given, one student gave the number of grains of a powerful drug for a dose, which was very excessive for the safety limit; the professor said nothing and went on with his questions; but later the student having collected his thoughts, asked leave to correct his statement as to the dose. The professor taking out his watch said, "It is now too late, the patient has been dead 14 minutes."

Hospital Clinics.

ST. BARNABAS HOSPITAL.

Clinic by A. W. ABBOTT, M. D.

Two recent cases have been so instructive to me that I hope to interest you by a brief account of them, as follows:

Case 1. Mrs. A., 27, married three years, never pregnant, menses regular, but painful; several severe falls, but no traumatism for six years; as well as usual, and attending to all duties up to three weeks ago. At that time had a red eruption in blotches; next morning, pain in left pelvis, which has not increased. About two weeks ago, a mass suddenly appeared in the left pelvis, which has not increased in size, but the tenderness is a little greater. Never had abortion, leucorrhoea or treatment of any kind for uterus or vagina; in fact, never had an examination. Temperature for last week, 99 to 102½ F. Bowels, constipated, painful, with mucous discharges.

Physical examination. Mass in pelvis, filling Douglas' sac and extending to half as high as umbilicus. Uterus normal in size, but pushed up to pubis, with fundus to the right; fluctuation and some tenderness.

Case 2. Mrs. B., 37, widow five years, never pregnant, menses regular, not painful. Peritonitis six years ago; said to have enlarged ovary five years ago. Eleven weeks ago began to be lame across bowels. Case was diagnosed as appendicitis by her physician (not a regular practitioner). Has been confined to bed ever since. Temperature nearly normal, 99½ F. Pulse 100. Bowels constipated, and movements painful with mucous discharges. Patient weak and nervous, and could give a very poor account of her case.

The above was all that I elicited from the patient before operation. Afterward, and when she was more composed, she stated, on being particularly questioned, that about three weeks after bowels became sore, she had a sudden awful pain, while at stool, from which she fainted; at this time, she began to flow, and flowed for six weeks, with discharge of a few clots; that she informed her physician also that there was a possibility of pregnancy, but the diagnosis of appendicitis remained unchanged, and she was told that she would soon be better.

Physical examination. Deep, fluctuating mass in left pelvis, extending from Douglas' sac to half way to umbilicus, not very tender. Uterine fundus pushed to right, normal in size; cervix normal; whole organ crowded toward pubis.

After ten weeks of suffering, she came under the intelligent care of a regular practitioner who promptly made a diagnosis of some kind of a cyst. I saw her a day or two after, and confirmed the doctor's opinion. Not having the benefit of the history obtained after the operation, the diagnosis was probably as complete as it well could be. The sudden terrific pain, with collapse and subsequent long-continued flow, with a tender mass which must have existed in the left pelvis for at least six weeks after the pain in bowels began, together with the admission of the patient that she might be pregnant should have made the diagnosis easy for the physician who had the case in charge at first.

It will be seen that these two cases were exactly similar as to physical conditions, that the pain and tenderness were about the same, and the only marked difference in the histories, as obtainable at the time, were the presence of a medium high temperature in the first case, with a normal temperature in the second; and yet the operation proved that the first was an inflamatory serous sac, enveloping a pus tube, while the second was a ruptured tubal pregnancy, just beginning to be septic.

In both cases, the operation consisted in a wide posterior vaginal incision. In the first, several small abscesses were evacuated after the serous sac had been opened, and finally the tube opened and three ounces of pus evacuated, iodoform gauze drain for all the abscesses, as well as the tube.

In the second case, after the peritoneum was opened, there was a gush of bloody serum; the finger then came upon a placental clot, on separating which, the bleeding became profuse; the finger was then pushed through the clot and this two and one-half's months foetus extracted. As it was then certain that the rupture had been primarily into the broad ligament, and adhesions had formed sufficient to make a firm wall, the placenta was rapidly torn off and the cavity packed with iodoform gauze.

Both patients are doing well. These two cases illustrate how nearly the symptoms of two distinctly different pathological conditions may agree.

The second case suggests that we should always bear in mind the possibility of an extra-uterine pregnancy, even when we have the least apparent reason to expect it. Had this been prominent in my mind, I might have gotten the history before, that I did after, the operation. Fortunately, I was prepared for what I found; otherwise, the hemorrhage would very likely have been fatal.

CLINIC AT ST. BARNABAS HOSPITAL BY DR. K. HOEGH.

Gallstone operation—Phlegmon of hand. November 21st. Mrs. M. C. 30 years old, married several years, never pregnant.

Complains of attacks of severe colicky pains in abdomen, felt strongest in epigastrium, and in both hypochondria, the pains have nearly always come on in the evening, after the patient has gone to bed, and without any assignable cause, such as indigestion, fatigue, or mental emotion. They have sometimes been first felt in the right

hypochondrium, whence they soon have spread over the whole abdomen, reaching great intensity, producing vomiting of bile, and other stomach contents. They are accompanied by a frequent desire to urinate; at times there have been spasmodic contractions of the thumbs and fingers. The pains have been very severe for perhaps half an hour, then they have abated to some extent, often only for a short time: they have some times lasted two or three days, at other times only a few hours, they have usually been followed by a mild diarrhœa.

She has never been jaundiced, nor has any swelling in abdomen been observed. It is a couple of years since she became subject to these attacks, which gradually have become more frequent, and more severe. At first her health was perfect in the intervals; lately she has suffered, from oppression in cardia; of late she observes that she cannot digest rich food very well.

Her previous health has always been good, but she has not menstrated except a few times during her 25th year.

She is very short and very fat, and has the appearance of perfect health. A physical examination of the whole body is made: Except prominence of abdomen, and a somewhat scanty development of pubes and the external genitals, nothing abnormal is observed, particularly no tumor, nor any increased tenderness at the region of the gallbladder; nor any trace of albumin in urine, in which no pus is found. The internal genital organs are apparently normal.

The patient has been under observation for a couple of weeks, during which time she had an attack of moderate severity, which I did not see, but in which the absence of a consecutive jaundice, and of abdominal tenderness after the attack was proved by personal observation.

What could these attacks be? They were evidently not inflammatory or febrile, for they were of too short duration, they came on too suddenly and ceased too suddenly without leaving any sign. They could thus not well proceed from a gastric ulcer, nor from appendicitis; the absence of pain, and the perfect digestion at the intervals enabled us furthermore to exclude an ulcer; so did her accumulation and retension of fat; for gastric ulcer leads always in my experience to at least temporary emaciation.

A recurrent appendicitis would leave a thickening or fulness in the iliac fossa; it would not be of so short duration when it was so intense as she described. Nor could it well be a case of oophoritis or salpingitis.

Attacks of pain from an incipient yet latent tubercular osteitis of the spinal column would probably be more continuous; the pains might come on in the night upon turning in bed, but we should expect stiffness of the back, even if deformity and local tenderness were absent. The localization of pain might well be the same as in this case, for a patient is usually not able to indicate the seat of any deep pain with any accuracy. But the disease has already lasted a couple of years, in that time the local symptoms of Potts disease would have been manifest, particularly as the pain had become more severe of late.

Could these attacks be of renal origin? She had during them frequent desire to pass urine; but there was never found albumen by any chemical test, nor pus-corpuscles in the microscopic field; nor was there any tenderness in either renal region.

Might not the attacks be purely gastric or intestinal spasms? If so, there must have been anatomical causes, especially adhesions, and they again would presuppose previous peritonitis, the presence of which there was no reason to suspect, as there was no history pointing to it.

Could the attacks be hysterical? The patient is a woman disappointed in the hope of motherhood, and considers herself as being sexually defective. The attacks are also accompanied by nervous symptoms, the tonic spasms of the fingers, the frequent desire to urinate. But she shows no other sign of lack of nervous balance, and has usually a very placid appearance. Still the possibility of hysteria cannot be excluded with absolute certainty.

On the other hand, all the symptoms can be explained by the assumption that this is a case of gall-stone colic. The suddenness of the attacks, the apparent absence of a proximate cause, the intensity, the perfect health in the intervals that lately has given way to slight gastric disturbances, the patient's fatness—all these considerations point to the presence of biliary calculi.

You might ask, if we ought not to feel a swelling or at least a tenderness at the point of the 10th right rib, and if we ought not to have jaundice. The absence of swelling does not count for much, when we consider the thick layer of fat covering the gall-bladder, which would make it impossible to detect it even if it were present. But enlargement of the gall-bladder is not even common in gallstone disease; and stones have only rarely been felt through the abdominal wall. The presence of icterus is only found where the stones in some way obstruct the common duct, either by blocking it mechanically, or by injuring the mucous lining in their passage through the canal, thereby producing a temporary swelling of it.

If this be a case of gall-stone colic, the stone must either be in the gall bladder and too large to engage in the duct, or there may be very small stones that pass through the duct without giving rise to an obstructing catarrh of its mucous membrane.

Her stools have not been examined for gallstones, as she was not seen immediately after she had the attack here in the city.

The case being explained to the patient as accurately as I was able to do it, she and her husband gave their consent to an operation.

Consequently an operation was made in the presence of the class, after the usual preliminary treatment of rest in bed upon fluid diet, and the thorough disinfection of the skin by scrubbing and an antiseptic formalin pad. Owing to the thickness of the fat the incision had to be made somewhat long, perhaps 3½ inches. It ran through the right rectus muscle, the fibres of which were separated by the handle of the scalpel.

After the bleeding had been stopped the peritoneum was opened. Omentum was uncommonly fat, and protruded in the opening making the search for the gallbladder difficult. When it was found, it appeared very small: it was situated very deep in the wound and looked like the tip of a glove finger, and about the same size: it could be followed for quite a distance inwards, upwards and backwards.

My intention was to dissect out a peritoneal flap from each side, sew them to the free part of the gallbladder, and only to open it after adhesions had taken place in 10 to 12 days. But it was found too difficult owing to the great depth, and the small size of the presenting part of the bladder. I had to perform the operation in one stage. Before I opened the gallbladder I had felt the stones through its walls. I packed the space as well as I could with sterile gauze sponges and opened the bladder; healthy looking bile came out, and with it a great number of stones, probably over a hundred; four of them were larger than a pea, others much smaller. A finger introduced through the opening made sure of the removal of all. The gallbladder was sewed up with fine silk in a double row of sutures, whereby the first row was turned in.

Suture by catgut in layers and finally of the skin and subcutaneous tissue by silk-worm gut completed the operation.

The later history was as follows: In 56 hours there developed pain and a temperature of 102-2, and a pulse of 100. Two wormgut sutures in the middle of the wound were removed, a closed dressing forceps introduced to the bottom of the wound, came into the peritoneal cavity; upon its with-drawal a few drops of dark blood followed. A wet antiseptic dressing was applied. The next morning the pain had disappeared very largely, and the temperature had gone down to 100, the pulse was 90, the tongue was moist. After this the dressing was changed every day, as supperation developed in the fistula. In two days more, the temperature became 99 and the pulse 84, as at present, 16 days after the operation. The fever symptoms have been absolutely absent for about ten days, and her general condition most satisfactory; but there is yet suppuration along the track of the fistula.

I do not anticipate a hernia, as the opening is very small, not over one-third of an inch, and the rest of the line of incision seems to be free from infection.

THE IMPORTANCE OF PERSONAL CHARACTER IN THE PROFESSION OF MEDICINE.

"It is now a good many years since Sir James Paget published in the St. Bartholomew's Hospital Reports a short paper embodying the results of an inquiry as to what became of a thousand of his pupils within fifteen years of their entrance at St. Bartholomew's hospital.

Of the 1,000, 23 had achieved distinguished success; 66 had achieved considerable success; 507 had achieved fair success; 124 had achieved very limited success; 56 had failed entirely; 96 had left the profession; 87 had died within twelve years of commencing practice (21 of them from diseases incurred in the exercise of their profesional duties); and 41 died during their pupilage (17 of them from phthisis.)" It may be explained that in this summary 'distinguished success' means that those classed under this heading had gained leading practices in counties or very large towns, or held important public offices, or had become medical officers of large hospitals, or teachers in great schools. Those are stated to have attained 'considebable success' who had gained and still held at the time the paper was written, 'high positions in the public services or leading practices in good districts,' or who had already retired on their earnings, or who had won for themselves 'much more than ordinary esteem and influence in society.' The rest of those who could be said to have achieved any sort of real success constituted the third class. This class, which might be called the moderaters embraced more than half of the total number of those whose histories were known. Of the other classes I need not here speak in detail beyond calling attention to the large number that left the profession, nearly 10 per cent. of the whole. Most of those who are classed under this heading discarded the medical profession for other pursuits—the church, the army, the stage, commerce, and agrculture. It was the concluding portion of the paper, however, which made at the time the strongest impression on my mind and which has induced me, even after this lapse of years, to bring it before you today. 'Of course,' says Sir James Paget, 'in watching and reflecting on the careers of my pupils I have come to some strong beliefs on subjects of medical education, but this is not the place for publishing them. Only one will I set down, which may be of use to future pupils and is justified by some hundreds of personal recollections. In remembering those with whim I was year after year associated, and whom it was my duty to study, nothing appears more certain than that the personal character, the very nature, the will of each student had far greater force in determining his career than any helps or hindrances whatever. 'All my recollections,' he continues, 'would lead me to say that every student may

likely forecast his life in practice, for it will depend on himself a hundredfold more than on circumstances. The time and the place, the work to be done, and its responsibilities will change but the man will be the same except in so far as he may change himself.'"

"It may be said that this was all very well thirty years ago, but that times have changed and that whereas it may have been, and, no doubt, was then possible for a man with character and perseverance by sheer force of good behavior and steady plodding to come eventually to the front, no man could do so today unless he also possesses a more than average share of intelligence. For the general standard of knowledge in our profession has been raised and the range of knowledge greatly widened, so that much now is required both in quantity and quality even of the ordinary pass man, to say nothing of the honored men and prize-winners. This way of putting the matter sounds exceedingly plausible, but it leaves out of view the fact that entrance into the profession is now guarded in a way in which it was not protected during the period of which Sir James Paget was writing, and that whereas a man could then enter upon his course of medical study without having given any proof of having received a fairly liberal education, it is impossible for him to do so now. The preliminary examination in general education which must be passed before a student can register, though not a severe test, is quite severe enough to keep back the hopelessly ill-educated man whatever good qualities he may possess. Hence the struggle is not, as might be supposed, between the man who has character without intellectual training, and the man who has character with it, but between the man who has intellectual training with character and the man who has intellectual training without. In such a struggle victory rests in the end with the man who, to his intellectual attainments, adds character. As Sir James Paget says, 'The time and the place, the work to be done, and its responsibilities may change, but the personal character of the student remains now as then the chief factor in determining his ultimate career.'"

(Dr. Cullingworth in the Lancet, Oct. 8th, 1898.)

AN ESTIMATE OF PUERPERAL MORTALITY BASED UPON OVER ELEVEN THOUSAND CASES.

Dr. E. Garrett Anderson (Brit. Med. Journal, Sept. 17th, 1898) quotes the records of births and maternal deaths in six London maternity hospitals during the years 1895-6-7, showing a maternal death rate of 1 in 483 cases. The death rate in nine other British maternity hospitals, during the same period, was 1 in 464, the total number of deliveries for the year being 11,122 with a total maternal death rate of 1 in 471. This is lowered to 1 in 5,636 when certain cases dying from causes not connected with the puerperal state are deducted. This remarkably low mortality is not accepted as a correct estimate in one of the leading articles in the same issue. Here it is set down as something more than 1 in 200, the previous low maternity report having been taken largely from the out-patient departments, where all the fatal cases are not reported because they frequently pass into the hands of other physicians before recovery is complete. The conclusion here arrived at is that the real puerperal mortality is very much what it was thirty years ago. J. W. D.

"LA FRIGOTHERAPIE."

Raoul Pictet, the famous Swiss savant, Chevalier of the Legion of Honor, discoverer of the liquefaction of oxygen, and member of more than forty scientific societies in France and Germany, has come to America to demonstrate to physicians and scientists here what he is convinced is a cure for diseases of the lungs, stomach, the circulation and the kidneys. La Frigotherapie, the name of his new discovery, may perhaps be roughly translated into English as the "freezing cure." The necessary machinery consists of a well of metal lined with thick furs, in which the patient descends, the depth being about five feet. This well is surrounded by an outer shell, while the cavity between the outer and inner walls is filled with a combination of sulphurous and carbonic acids known to the scientific world as "liquide pictet," after its discoverer. This gas is kept in a liquid state at 110 degrees below zero, and is continually forced into the cavity by pumps.

M. Pictet says the patient, surrounded by the furs and the icy liquid, has no impression of cold whatever, and in fact his temperature rises after three seconds' treatment, increasing from one-half to one degree in five minutes. A period of treatment ranging from five to fifteen minutes is always sufficient for the time being, the number of needful repetitions varying in each individual case.

M. Pictet says he himself, after fifteen years of illness, was cured after eight descents into "the well."

The prince of Servia, he said, was absolutely cured by six descents, after twenty years of continuous ill health.—N. Y. Herald.

Charlotte de Baviere, the German Princess, second wife of the Duc d'Orleans, brother of Louis 14th of France, in her autobiography, says, "She always wanted to be a boy, and having heard that Marie Germain became one by jumping, I used to take such fearful leaps that it is a miracle I did not break my neck a thousand times,"

A happy, prosperous, and contented New Year to all readers of the Medical Dial.

HOSPITAL CLINICS BULLETIN.

Minneapolis City Hospital.

MONDAY—1 to 3 p. m.—MEDICINE, Drs. Glenn and Williams.

TUESDAY—9 to 11 a. m.—PHYSICAL DIAGNOSIS, Dr. C. F. Nootnagel.

" 11 to 12 a. m.—PHYSICAL DIAGNOSIS, Dr. J. W. Bell.

" 10 to 12 a. m.—GYNECOLOGY, Dr. W. J. Byrnes.

" 2 to 3 p. m.—MENTAL & NERVOUS DISEASES, Dr. W. A. Jones.

" 3 to 4 p. m.—DERMATOLOGY, Dr. M. P. Vander Horck.

WEDNESDAY—9 to 11 a. m.—SURGERY, Dr. W. A. Hall.

THURSDAY—9 to 11 a. m.—GYNECOLOGY, Dr. A. W. Abbott.

FRIDAY—9 to 11 a. m.—MEDICINE, Dr. J. H. Stuart.

" 4 to 5 p. m.—MENTAL & NERVOUS DISEASES, Dr. Leo M. Crafts.

SATURDAY—9 to 11 a. m.—SURGERY, Dr. W. A. Hall.

" 11 to 12 a. m.—PEDIATRICS, Dr. H. B. Sweetser.

" 1:30 to 2:30 p. m.—MEDICINE, Dr. H. L. Staples.

" 2:30 to 4:30 p. m.—MEDICINE, Drs. Haggard and Head.

St. Barnabas' Hospital.

MONDAY—9 to 10 a. m.—SURGERY—Dr. J. W. MacDonald.

" 10 to 11 a. m.—SURGERY, Dr. Knut Hoegh.

SATURDAY—11 to 12 a. m.—SURGERY—Dr. J. E. Moore.

" 1 to 2 p. m.—MEDICINE, Dr. C. H. Hunter.

St. Mary's Hospital.

SATURDAY—9 to 11 a. m.—SURGERY, Dr. J. H. Dunn.

Asbury Methodist Hospital.

THURSDAY—9 to 11 a. m.—GYNECOLOGY, Dr. F. A. Dunsmoor.

" 11 to 12 a. m.—OPHTHALMOLOGY, Dr. F. C. Todd.

FRIDAY—9 to 11 a. m.—SURGERY, Dr. F. A. Dunsmoor.

CORRESPONDENCE.

Minneapolis, Minn., Dec. 16, '98.

To the Editor of the Medical Dial:

Dear Sir:

It is with more than ordinary pleasure that I take the liberty of sending you these beautiful "Lines to a Skeleton" that they may be presented to the profession through the "Dial." It is, perhaps, not unlikely that many are already familiar with them. Even though this be true, it seems yet not inappropriate that they be presented anew.

From a clipping made by me some fifteen years ago we learn, relative to this poem that, Fifty years ago the London Morning Chronicle published a poem entitled "Lines to a Skeleton," which excited much attention. Every effort, even to the offering of a reward of fifty guineas, was vainly made to discover the author. All that ever transpired was that the poem, in a fair, clear hand, was found near a skeleton of remarkable beauty of form and color, in the Museum of the Royal College of Surgeons, Lincoln's Inn, London, and that the curator of the museum had sent them to Mr. Perry, editor and proprietor of the Morning Chronicle.

Fraternally,
Howard McI. Morton.

LINES TO A SKELETON.

Behold this ruin! 'Twas a skull,
Once of ethereal spirit full;
This narrow cell was life's retreat,
This space was thought's mysterious seat,
What beauteous vision filled this spot!
What dreams of pleasure long forgot!
Nor love, nor joy, nor hope, nor fear,
Have left one trace of record here.

Beneath this smouldering canopy
Once shone the bright and busy eye;
But start not at the dismal void—
If social love that eye employed,
If with no lawless fire it gleamed,
But through the dew of kindness beamed,
That eye shall be forever bright,
When stars and suns have lost their light.

Within this hollow cavern hung
The ready, swift and tuneful tongue.
If falsehood's honey it disdained,
And where it could not praise, was chained;
If bold in virtue's cause it spoke,
Yet gentle concord never broke;
This silent tongue shall plead for thee
When time unveils eternity.

Say, did those fingers delve the mine?
Or with its envied rubies shine?
To hew the rock or wear the gem
Can little now avail to them.
But if the page of truth they sought,
Or comfort to the mourner brought,
These hands a richer mead shall claim
Than all that wait on wealth or fame.

Avails it whether, bare or shod,
These feet the path of duty trod?
If from the halls of ease they fled
To seek affliction's humble shed?
If Grandeur's guilty bribe they spurn'd,
And home to virtue's cot return'd,
These feet with angel's wings shall vie,
And tread the palace of the sky.

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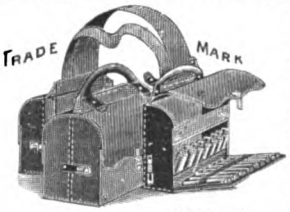

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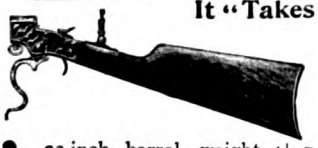

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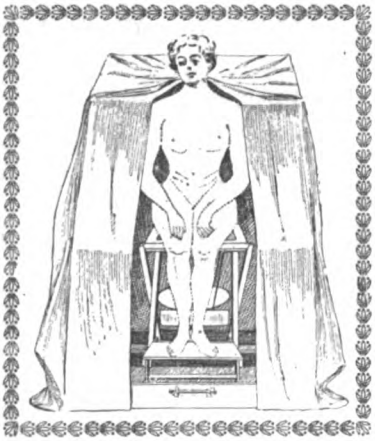

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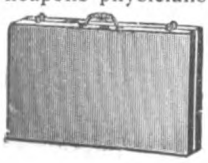

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THE MEDICAL DIAL

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Original Articles.

INFLUENCE OF THE MIND UPON DISEASE, WITH REFERENCE TO FAKES, FADS AND FANCIES.

By W. A. JONES, M. D.

Clinical Professor of Nervous and Mental Diseases, University of Minnesota; Attending Neurologist, St. Mary's, Asbury Methodist and Northwestern Hospitals; Member American Neurological Association, Minnesota Academy of Medicine.

(Read before the Hennepin County Medical Society, Minneapolis.)

When Burton wrote his "Anatomy of Melancholy," in 1651, he showed his familiarity with the subject of this paper. He says, "Some are molested by phantasie; so some, again, by fancy alone and a good conceit, are as easily recovered. * * * All the world knows there is no virtue in charms, etc., but a strong conceit and opinion alone, as Pompanatius holds, which forceth a motion of the humours, spirits and blood, which takes away the cause of the malady from the parts affected. The like we may say of the magical effects, superstitions, cures, and such as are done by mountebanks and wizards. As by wicked incredulity many men are hurt (so saith Wierus), we find in one experience by the same means many are relived,"

"Imagination is the medium deferens of passions by whose means they work and produce, many times, prodigious effects; and as the phantasie is more or less intended or remitted, and their humours disposed, so their pertubations move more or less and make deeper impressions."

In 1771, Unzer said: "Expectation of the action of remedy often causes us to experience its operation beforehand."

About the same time, John Hunter recognized the influence of the mind when he stated:

There is not a natural action in the body whether involuntary or voluntary, that may not be influenced by the peculiar state of the mind at the time." Strumpell says, "one-half of all cases of impaired health are of mental origin."

All sensations (general and special) movements and organic functions, are acted upon by the three divisions of the mind, viz: The intellect, emotions and volition, which may excite, pervert or depress the sensory, motor, vasa motor and trophic nerves, and through them cause changes in sensation, muscular contraction, nutrition and secretion.

Consider for a moment the various sub-divisions of these faculties. The intellect embraces attention, sense perception, appreception, memory and language. The emotions are made up of feelings., instincts, desires, appetites, affections, etc. Volition includes the impulses and also the will, which stands guard over the former, thus constituting self control. To adorn the mind, the above-mentioned trio created a child, imagination, which if dissected, would show that its composition was a mixture of expectation, belief, confidence, faith, imitation, sympathy and hope. These faculties, with their side paths, are essentially possessed by all men, and constitute the anatomy of the mind. The mental function, however, known also as mental character, the physiology of the mind, differs in each individual, as shown by the different results attained by the laborer who never goes beyond the length of his shovel, and the general manager who directs the operations of a completed railroad. There is no limit to the diversity of individual character. One type likens himself to an earth-worm, and the other wants to be president of the United States. One is a cynical, obstinate expansionist; the other a "peace-for-any-price" man.

Clark, in his work on mental diseases, says: "Each man's mind is law unto itself; what is normal in one man may be abnormal in another."

Nevertheless, there is a certain well?defined but elastic balance to the normal mind; within

whose range there may be many slips, and yet the individual be in normal condition. If he goes beyond this normal range, it proves a defect somewhere in his mental organization.

Clark says: "Mental character varies at different ages and under different conditions in the same individual, and is determined by the exercise of certain laws. First and most important is the law of individuality, which is affected by three other laws: (a)Evolution; (b) dissolution; (c) environment."

Take, for instance, a few simple illustrations: A man born of good ancestral stock, possessed of sound body, with a uniformity in the development of his special senses and mental faculties; with a definite but normal range of elasticity; with the power to weigh, judge and reason; and with definite limitations to his imagination, is looked upon as a man with a well-balanced mind. Under ordinary or even extraordinary conditions he will be able to maintain his equilbrium through life. Should he marry a woman equally healthy and stable, the off-spring presumably would be of the same type, and so on, through sucesive generations.

Somewhere, however, in the course of life, should physical calamity interrupt this equlibrium at one of the periods of evolution, and should it be of sufficient severity to cause a physical defect in the individual, which is only partially overcome, this will change the course of subsequent events. If this individual marries a strong, healthy person, their off-spring may come into the world in apparently good health, and go through life and maintain a practical equilibrium.

The succeeding generation, however, may produce an individual who is defective in some degree, and when he reaches maturity becomes neurotic; and if he, in turn, marries a woman of weak physique, the probabilities are that they will bring into the world a family of neurotics.

Given an ancestral history showing inherited tendencies of mixed types, the children physically feeble but apparently, sound, reasonably well but delicate and under the ordinary circumstances of favorable surroundings and good training, the child will develop a well-balanced mind and safely and sucessively pass the various periods of evolution, reaching old age in full possession of mental and physical vigor.

Suppose, however, the individual suffers in childhood or at puberty, a severe illness the delicate organization is profoundly impressed and a pathological condition is engrafted which interferes with the development and growth of the mental organization. Under such conditions the nutrition of the nervous system is impaired, and, as a result of this pathological process, the individual starts on his neurotic pathway, becomes unstable, irritable in mind, changeable in character and disposition, emotional, depressed, lacks self-control, and is posesssed of a diseased imagination and becomes a typical neurasthenic.

Under different circumstances, this instability is manifested by an over-activity of the motor sphere, and you have an individual tense, exalted erratic, alert and in constant search of excitement.

Both types are highly imaginative, with judgment and reason not in full accord, without sufficient self-control to guide themselves properly in their daily life, and constantly confronted by certain facts which they cannot explain satisfactorily to themselves. They are easily fatigued, ready to imitate or follow a mob today and a rival mob tomorrow, applauding one day what the condemned the day before, live in a perpetual state of indecision, and when confronted by unwholesome facts, absolutely opposed to what they believe, "blindly ignore them in blind ignorance of their own blindness."

These various types are more or less modified by conditions of time and place.

A young man born of defective parentage, spjends the first few years of life on a farm in apparent good health, goes to a neighboring city, struggles for an existence, meets with misfortunes or illness and crippled in mind or body, becomes a neurotic. He marries a feeble individual who loads him with burdens too heavy to bear, with the result that his children are more or less defective and help make up the great army who are swayed by impulse, attracted by false theories, uprisings, fads and fancies. Such individuals are in a constant state of excitement from over-activity in social, religious or political strikes are unable to digest a broad proposition, and failing to make more than an existence in life, ultimately form the dregs of society.

Is it not natural that these classes should suffer all sorts of ills, an inumerable variety of disturbed or distressed bodily functions, at the bottom of which lies an unfavorable heredity, direct or indirect. The tendencies inborn from consumption, arterial disease, intemperance, insanity, epilepsy, etc., which from trivial causes become pathological conditions, express them-

selves by a disturbance or lack of uiformity of mental function, further emphasized by insufficient rest, improper nutrition, bad environment and training. This type cannot forsee accidents and is unable to ward off afflictions. Under such unfavorable conditions, what is there to be said for that fourth faculty of the mental constitution, the moral nature. Would it be wise to agree with some one who said that the conscience was the index of the state of a man's digestion, or would it be wiser to place the fault in the nervous system?

There is still another type with an ancestral history running two orthree successive generations, in which indolence, shiftlessness and inertia form the foundations from which the child of todoy springs. We will presume such child to be removed from its early surroundings soon after puberty, with every prospect for success. For a few years it seems probable that the individual has adopted new characteristics, and may be the nucleus of a new and strong generation, as it might if nothing occurred to disturb its equilibrium. Sooner or later, however, illness, matrimony, childbirth or domestic errors arise, which although commonplace are in this instance sufficient to topple the balance, and the result is, we have a neurotic who drops back to the plane of former generations, and is indifferent to anything that will prompt an advance, he falls into a mental rut, and is only happy and contented when detailing his woe to a sympathetic listener. These patients do not so often seek comfort in the various fads of the day, but choose rather to encourage (?) the medical profession. They enjoy the sensation of variability of symptoms, seeking different doctors and their varied diagnoses. These types are known as hysterical or neurasthenic degenerates.

There is a class still higher up in the scale, who spring from fair stock, and who have a fair bodily and mental constitution, and are considered all-around well people. Their defect lies in a part of their mental organization, due largely to errors in early training. They are highly imaginative, and have an abnormal degree of suggestibility. They are easily influenced by all sorts of suggestions from the outside world, and are frequently victims of auto-suggestion. Their minds are like a delicate pendulum, which swings back and forth in every suggestive breeze. In some cases these states my be ouly temporary, or due to some outside or accidental cause, and when this cause is removed, the settle back into a fairly normal state.

These are the various types which send representatives to the various shops (?) that display the healing sign over the door. They patronize these industries for various reasons. I asked a patient, the other day, why so many people went to these places, and her reply was that "someone told them to go." And so it is. Too many are imitators and follow blindly a passing cloud, rather than think and reason as to cause and effect. Others go through ignorance and superstition, and unfortunately, others go because the physician is unable to cure them of their ills.

The physician himself is often responsible for this state of affairs. Some times—many times—the physician is incompetent, makes errors in diagnosis, treats the patient for one thing today, stakes his reputation on the conditions, then changes his diagnosis and treatment and attacks another organ, and so on through the pelvic and abdominal viscera, until it finally dawns upon him that the disease is of nervous origin. Frequently, too, he dismisses the case from his mind as "only nervous" without inquiry into the history which has led up to all this disorder.

Frequently the physician is an alarmist—sincerely so, perhaps, in a few instances, since the habit is readily acquired. In his haste he drops a suggestion into the neurotic soil that produces symptom after symptom, until the patient is wholly at sea, travels from one medical man to another until exhausted, and readily joins the class that keeps the faddist in good purse and spirits.

The fact is indisputable, that the new fads and fancies do some good; these with other types of charlatans stumble upon the cause overlooked by the physician, the influence of the mind on health and disease. Patent instruments, electric belts, oxydonors, etc., succeed in distracting the attention of the patient from the old path, and direct it in new channels, awakening hope and confidence, and compelling the individual to immediate execution of long-forgotten occupations and joys. With this new awakening, new attention and interest, the nutrition and secretion of the body receive a new stimulus, and, indirectly, the tired nerve cells are better nourished and therefore more stable.

The Christian Scientist operates through the attention, which starts a feeling of renewed hope

and confidence in recovery. Then, two, we must consider that the imagination is very strongly appealed to by the meaningless mystery, the avalanche of beautiful words with a constipation of ideas, and the distortion and desecration of biblical teachings that throw a too transparent halo about the unscientific, unchristianlike, but successful, commercial fad.

Divine, Faith and Mental healers operate in much the same way, but do less harm, because they claim much less power.

The osteopath—a revivor and survivor of the old-fashioned bone setter, but on a more elaborate scale—though founded on ignorance, gives his patient a modified form of massage, inferior to the trained masseur. Together with the fact that it is supposed to be a new thing, the appeal to the omagination takes the patient out of the old rut and he starts a new train of ideas. To assure the patient that a bone or ligament is out of position, and is pressing upon a nerve, is a very forceful suggestion, which few can resist. These people, like the Christian Scientists, do some good, by exercise and manipulation. The profit by the mistakes of our professional man, who overlooks some bodily error, and fails to appreciate the benefits of fresh air and exercise, and the withdrawal of drugs. The danger of such methods is their too great willingness to tract diseases that require enforced rest, simple or no exercise, and the application of appropriate remedies.

The variously advertised patent medicines operate through the mind by their flaming advertisements, singularly beautiful photographs, and skillfully employed terms, to inspire hope and confidence. Theye also operate upon the abdominal organs because they contain cathartics and diuretics, upon the nervous system because they contain sedatives and opiates, and thus the relief or cure is effected.

In spite of the success of these fads and methods, the patient is only benefitted temporarily in most instances; after a time his troubles return, and are in turn relieved again, and so the circle revolves. It stops again at the physician's door, or the coronor's office. By this time, let us hope, the medical man has profited by the revolutions of his patient. The cures effected by these various fads are heralded wide and far, and the conditions magnified almost to the bursting point. It is passing strange how their failures are unspoken, or at least glibly explained, while the failures of the physician are given fleet wings, and his modest successes are too often looked upon as "spontaneous recoveries."

If the physician would but open his mouth and stoop to the undignified and advertising methods of the various fakirs, his friends would marvel and wonder, and his enemies would at least damn him with faint praise. The unrecorded recoveries among his neurotic patients with their peculiar symptoms, that have been successfully treated in a scientific, masterly and dignified manner, would outnumber the so-called cures of all the faddists combined. Yet is difficult to make the lay mind appreciate that fact, for the reason that no mystery surrounded the cure. Every physician will readily recall a large number of cases that have occurred in his practice, that have recovered under common sense treatment, wholesome suggestion, and attention to the correction of bodily errors; and yet neither patient, physician nor friend attached undue importance to the matter.

Let me call your attention to a few cases which are of daily occurrence:

A young girl is in a railroad accident, which injured no one, and did not even hurt the rolling stock. Naturally she is frightened, and her muscles are put upon a strain. She sees a physician who is careless and hurried, and is told that her spine is injured, and that it will take her years to recover. She being a neurotic, immediately adopts the suggestion, and manifests all sorts of symptoms, which rapidly grow worse. In due time her suit is decided; she gets a percentage of the verdict, blows in her money, and—is well

A man falls, strikes on the back of his head, and receives a wound which in due time heals perfectly, but leaves him with a pain over the course of a part of the posterior auricular nerve, which lasts two years. He drifts around, hoping for relief; finally goes to some one whom he has heard can cure anything, and submits to a complete examination. He is convinced that the physician knows his business, is told the trouble is peripheral and not central, as he feared, is given some simple treatment, coupled with a strong suggestion, and forthwith the pain disappears, never to return. That man was a mild neurotic, suffering from auto-suggestion; in other words, he had a pain in his mind.

A young girl of eighteen with an unfavorable ancestry suffers from a mild illness, which is finally accompanied by sleeplessness, for which she has taken morphia for over a year. She vomits her food, has retention or urine, for

which she is constantly catherized, has a double lateral curvature of the spine, a contraction of one arm and has lost the knee jerks. She is removed from her old surroundings, the morphia, catheter and spinal brace taken away; she is thoroughly examined, treated by hydropathy and electricity, also by good mental discipline and suggestion, without hpnosis, and in two weeks all symptoms have disappeared and she fully regains her health. Subsequently she marries, has a family of children, and remains well after five years.

Another familiar type shows in the mother a history of consumption, or other bodily disorders that impair the nutrition of the nervous system, as a result of which the woman is a sufferer for years, finally dying in childbirth. The father, a highly cultivated man, is sleepless and has asthma. The oldest child in the family is obliged to assume charge of the household at fifteen, looking after and acting as a mother to several children. She is of an intellectual turn of mind, a hard student, absorbing knowledge after bedtime. In this unfortunate environment she grows nervous, exacting, irritable, sleepless, emotional, and is in a constant state of tension on account of over activity, or over-tire of her intellectual sphere; in young adolescence she becomes a victim of hayfever, and each year thereafter suffers from this additional neurosis. During the interval of rest she is depress, emotional and sleepless, never reaching a point of comfort. The remedy for such a case is absolute rest for a long period, followed by partial rest, diverse occupation other than books and literature, and a well defined amount of exercise. These remedies carried over a period of from one to three years would insure comparative comfort, if not complete recovery.

Here is another: A woman of thirty-five, born of good stock, with only a trace of some pathological defect, is well and strong up to the age of thirty-two. In the meantime, has five children and three or four miscarriages, without syphilis. Her oldest child is a defective from an injury to the head in its first year. Three years ago, after a miscarriage, the patient begins to complain of her feet and limbs "trembling inside" as she expresses it. She suffers many things from many physicians and her fears and symptoms are unrelieved and unexplained. She has one doctor who expresses suprise that she stood such and such a shock so well, and as a result is rapidly developing a chain of symptoms that are due entirely to a distortion of her mental functions. The remedy is obvious.

Look for a moment at the French girl, Louise Lateau, who periodically reproduces evidences of the crucifixion, and note the influence of the mind over the body. Have you ever tried a hypodermic of apomorphia in a hystero-epilepsy, and watched the effect of nausea and relaxation upon the disjoined and erratic operations of the neurons?

What do all these observations and suggestions teach us? First, the necessity of paying closer attention to the influence of mental impressions; second the study of the individual and his complete record; third that a majority of our patients are members of one of the neurotic classes: fourth, that these neurotics suffer more and longer than other types of patients that they demand more attention to details, and that their symptoms should be carefully considered, after thorough examination and investigation; fifth that they should understand in plain, simple terms what it is necessary for them to know, not forgetting to give every encouragement and a good prognosis; and last that they should be educated to appreciate the science of medicine.

From the fads, we as physicians, can learn much, and many of their methods can be modified to suit our cases without a compromise of dignity or science. We can also profit by the methods of the osteopath by making patients pay for what they are about to receive. In this, these people are adepts, We can also keep in mind the benefits of massage and exercise. From the Christian Scientists we should learn to divert the attention of the patient from himself, and assist him to occupy his mind by diverting them from the old paths, by the cultivation of hobbies. But above all, we must learn from all of these new methods the necessity of improved nutrition enforced rest, and properly directed exercise and occupation, to improve the general tone of the nerve cell, and thus lessen their fatigue and irritability and promote good habits and stability. This means that we must begin early with the child, to improve its environment, to improve its physical organization and to promote its nerve growth by attention to sleep, rest and diet, to early develop a few habits that will ultimately form a basis of character, and to prevent the too early endeavors of the mother and kindergarten to show off his attempt in specializing sensations. Give him a chance to grow in true animal

fashion without too much fuss and attention, and in later years, try to cultivate in a uniform manner his nerve centers, not one or a few, but all. Much can also be done with the older neurotic children and young adults by a more careful direction of their habits and life.

What shall be done with the fakes, fads and fancies? Feel toward them as you choose, but at least don't fight them. They will die out as they have done for centuries; of course, others will spring up in their places, but let them spring. The only successful way to treat them is to educate the physician so that he will be both able to cope with disease and better able to recognize a nervous system when he sees it; able to make a more careful and scientific diagnosis, free from adverse suggestion; in other words teach him to treat disease scientifically and simply.

Next, educate the patients in the belief that the science of medicine is older than any other fad on earth; that it is constantly advancing; that it is not such a complicated thing as they may supopse; that treatment is becoming more and more simplified, and that in the hands of a careful, conscientious physician, the patient is safer than in carrying his disease to a fakir, who is ignorant and often dangerous.

Of course, all the people will not belive this; it will take years to change their views. Some of our neurotics will never be convinced, and these will be more contented and happy in their flight toward heaven or hades guided by the willing hand of a Christian Scientist or Osteopath, whether they are suffering from tuberculosis of bones, or the ravages of diphtheria.

The only other solution I have to offer in the study of the future of these fads and fakes is, to make them a part of the field of medicine; in fact, make them one of us in the healing art. To do this in all fairness, and to appeal to the fair-mindedness of our legislators to frame a law compelling all interested in the healing art to pass the examination provided by the state board of examiners in medicine, thus making us all epuals tand providing all with a state license. The only exception I would make would be to relieve them from passing an examination in materia medica and therapeutics.

If all would pass such an examination and obtain a license, no one would object. It is barely possible, of course, that in the preparation for such an examination, many applicants might drop by the wayside and go into the legitimate field of medicine.

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BY H. McI. MORTON, M. S., M. D.

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Synonyms: "Maggots in the Ear;" "Myasis Aurium;" "Parasites in the Ear;" "Peenash;" "Worms in the Ear;" "Larvae in the Ear."

Remarks: The subject of larval involvment of the middle ear, and adjacent or contiguous sinuses, has interested me for the past four years owing to the presentation of several cases affected in this manner. While it is true that the predisposing and exciting causes by which this disease originates are found more frequently in tropical climates, both these and their natural result—the disease—are neither unheard of, nor exceeding uncommon in our less temperate Northwestern climate. In various otological journals have recently appeared several articles reporting cases of involvment of the nasal chambers—invasion of the ear is much less common, for reasons to be spoken of—and showing both an unusual interest, as well as a frequency of the disease. These various articles—if my study and observation have not misled me—indicate a lack of conformity in classifying the flies and their larvae,—the true cause of the disease—and an uncertain knowledge of the parts played by the various members of the fly family in causing the disease. Some flies not definitely parasitic the enumerated as causes. Paramount to the desire to offer a proper classification, however, it is my aim to advocate a remedy, which I believe less objectionable than chloroform,—the one remedy up to the present—and equally efficient.

Historical; Myasis is a disease prone to occur in tropical climates. We may easily perceive the reason for this predilection in several factors. In the first place, the presence of the larvae is more constant, and the temperature more favorable to their rapid growth. In the warm climates ozaena—a decided predisposing cause—is found frequently and the flies are attracted more quickly to it, owing to the marked odor, and also to the fact that individuals lie down upon the open and exposed fields and woods and fall asleep, thus permitting the flies to deposit their eggs when once attracted. This last habit is very common in warm climates.

However, the disease is found in our Northwestern States, and I infer from Burnett's book he has found the condition on the Atlantic seaboard. In South America, Mexico, and India, the disease is not uncommon and is very frequently fatal. Kimball has reported eight cases occurring in Texas, and Hanson two additional cases from the same State. The earliest reported cases were those of Garlich of Behrends, and of Wohlfahrt. Lahory reported ninety-five cases but since two only, were fatal, the involvement must have been by other than the "screw worm." Coquerel of Cayenne reports five cases, three of which died. The disease has been studied by Morel and Weber in Mexico, by Frantzius in Costa Rica, by Petrequin in Italy, by Urbanek in Germany, and in France by Moquin-Tandon. These cases have been of involvement of the

There are about sixty known species of the Oestridae (fig. 1), all of which in the larval stage are parasitic. The flies are moderately large in size, the bodies more or less hairy, but not brilliant in coloration. The larvae are parasitic in three localities, the nares and their accessory sinuses, the skin, and lastly the stomach. There are seven species of the Gastrophilus; thirteen of the Hypoderma, and a variety, called the Cephalomia, found in the throat of the camel.

The second family, the Muscide (fig 2), compose one-third of the entire fly family. The two varieties of this family which interest us most are the "screw worm fly" (Campsomizia Marcellaria) and the "blow fly (Calliphoria Vomitoria), although Hackley states that the M. larvorum, M. nigra, M. cibaria, M stabulans and M. caesar are all parasitic upon man).

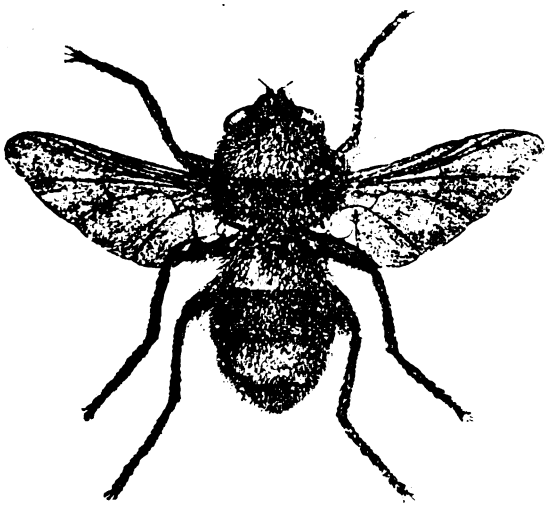

Fig. 1.

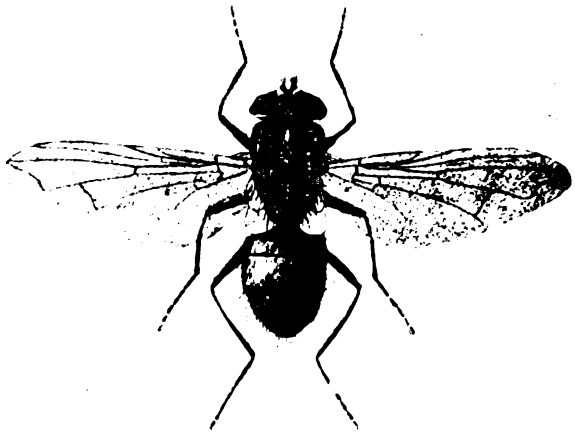

Fig. II.

nares only. Cases reported, in which larvæ have attacked the ear, are not of great number. Recently Folkes of Guataumala, Goldstein of St. Louis, Foster of Kansas City and Steel of Mexico have reported cases of involvment of the nares.

Aetiology: Of the order Diptera we find three families presenting special interest while considering larval affections of the ear. These are the Oestridae, or "bot fly," the Muscidae, "blue bottle" or common "house fly," and lastly the Sarcophaginae, or "flesh fly." I deem it fitting, before proceeding to the more strictly medical aspect of the subject, to briefly digress in order to study somewhat of the characteristics of these flies and their larvae, the latter being, in this case, the true causus morbi.

Of the last family in the order spoken of, (fig. 3), the Sarcophaginae, we find in the larvae of the "flesh fly" called by some the Sarcophagia Carnaria, by others the Sarcophagia Georgiana, one of the most vicious parasites that attacks man. It is this larvae and the "screw worm" only that we consider, although the larvae of all the flies mentioned do attack man, but, as far as I am aware, with far less seriou results than the larvae of the Campsymyia. Of this larvae Prof. Lugger says; "The eggs, about one-sixteenth of an inch long, of a light yellow color, are deposited by the female on or near dead animals. The mother must possess wonderful organs of smell, or of some other sense, which enable her to detect such food, even if well hidden or obscured by other odors. These

eggs being quite soft, would soon be destroyed by the direct rays of the sun, hence they are deposited under the carcass or on its shady side. Such flies are known to contain as many as 20,000 eggs in their ovaries. These eggs hatch in one or two days, depending upon the length of the time that they were retained in the ovaries by the mother-fly before discovering the proper food for her young. The dirty-white larva possesses the usual form of fly-maggots; a ring of bristles between each pair of segments gives the maggot a fancied resemblance to a screw, hence the above popular name. These bristles act as legs in locomotion. The mature maggot is three-fourths of an inch in length, and about one-eighth of an inch in diameter; it possesses a tapering head, that contains two pointed black hooks, which are the mouth-parts used to obtain food. The posterior end of the maggot is very much truncated. The maggots grow very rapidly and reach their full size in four to six days, when they leave the substance upon which they have fed and enter the ground, where, just below the surface, they contract into dark-reddish and barrel-shaped puparia, about one-third of an inch in length. Inside such a puparium the fly is formed, which takes about seven days, when it leaves both the puparium and the ground to fly about and enjoy life according to its peculiar fashion."

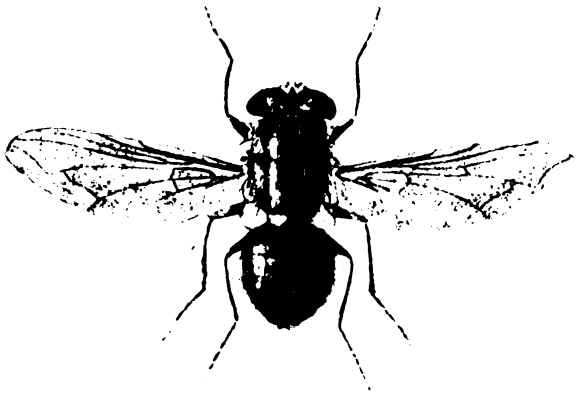

Fig. III.

I may properly add that it has been reported upon good authority that the larvae of a gadfly found in Cayenne and known as the "Macaco Worm," attacks man.

Diagnosis: If the possibility of the disease is kept in mind, and with the assistance of the reflector and speculum, no error can occur in diagnosis.

Symptoms and Course: Under this heading I will report the two cases of Myasis Aurium which have come under my care.

Case I.—I was called in consultation to see Mrs. W., a woman of fifty years. There had existed for a long time a purulent otitis media. Two days previously a crawling sensation attended with pain was noticed. A few days before these symptoms she had removed a portion of a large fly. Inspection disclosed a neglected and foul smelling otorrhoea. The ear was syringed and a mass of dirty white larvae observed in the fundus. These, numbering about eight or ten, were removed by forceps, and the ear packed with powdered boracic. There was no subsequent trouble.

Case II.—In July, 1892, I was called to see a boy thirteen years of age, who complained of excruciating pain in an ear affected with a chronic purulent discharge. A mass of maggots was removed from the ear with great difficulty by the syringe and forceps.

According to Delavan, the symptoms when the nose is involved, are irritability, tickling and sneezing; later, formication, bloody discharge and epistaxis with oedema of face, eyelids and palate; excruciating pain, generally frontal, insomnia, and if condition is unrelieved, convulsions, coma and death.

The ear, being contained in a dense bony case, offers more obstruction than is found in the nose, yet I have no doubt that were the condition neglected the larvae would soon burrow into the cranial cavity. In myasis aurium there has existed an otorrhoea, as a rule, yet Kurtzman reports that he has found a mass of larvae in the canal of an ear previously healthy. When the ear is involved, the patient has a sense of tickling, formication, and fullness, soon followed by excruciating pain, attended by overpowering dread and fear. There may be, as stated by Blake, circumscribed inflammation of the canal set up. Blake has shown that the larvae have a peculiar sucker-like apparatus with which they hold on, and all authorities agree that not only the soft tissue may be destroyed, but that the bony structures as well, fall before the onslaught of the "screw worm." Those attacked were, as a rule, patients suffering with ozaena, the odor attracting the flies.

It is interesting to observe the facility with which these larvae pass through a very much smaller opening than the diameter of their

bodies. The steps by which this act is accomplished is shown in figs. 4, 5 and 6. The end of the larva is pushed through the opening (fig. 4) after which the body contents are gradually forced through the stricture (fig. 5), until they occupy the other side of the sac (fig. 6). This power renders it a manifestly dangerous invader of the recesses of the nares and middle ear, with their oftimes inaccessible ramifications..

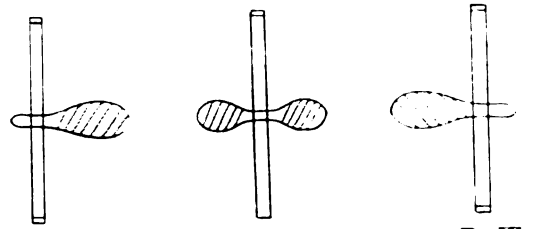

Fig IV Fig V Fig VI

Therapeutics: Alcohol, turpentine, carbolized solutions, corrosive sublimate, calomel, balsam of Peru, salicylates and chloroform, have all been proposed, and tried, to dislodge the larvae, but all are inefficient except chloroform. This is practically the only remedy now used, and while a valuable agent, is irritating to the mucous membranes, especially when injected, and this is the only manner in which its action is assured. Roosa has suggested Labarraque's solution of chlorinated soda. Emulsions of various oils have been advocated. Their action is probably a mechanical one, and is not satisfac tory.

Burnett conducted some experiments to learn of the relative larvicidal power of a few drugs. His results are as follows:

Salicylic acid killed the larvae in thirty minutes.

Alcohol killed the larvae in five minutes.

Ether killed the larvae in two minutes.

Chloroform killed the larvae instantly.

As will be noticed by my clinical report, no medicinal agent was used, the larvae being removed by forceps. As these cases were all happily seen soon after involvment, this simple means sufficed, but in cases more advanced where the healthy tissues are attacked, and even the bone, this will not avail. Also in the cases in which the nares and accessory sinuses are attacked, the forceps play a very inadequate part.

Pyrethrum; Since these cases were treated, I have had my attention called to pyrethrum as a sovereign remedy, by Prof. Lugger. It has been used by him with decided results in cases where cattle have been attacked by larvae. (Prof. Lugger tells me that the nares, and particularly the generative organ of male cattle are attacked.) It has been most efficient in these extreme cases, and I have from my own experiments upon larvae shown its efficacy. When used it drives them from the areas attacked, and soon after causes their death, and is not irritating—two decided advantages over chloroform. In using chloroform the larvae are killed instantly, and it is no easy matter matter to remove them. Pyrethrum, even in saturated solution is harmless and non-irritating. A slight puff of the powder upon the common house fly kills it in five seconds. In my experiments I have used an alcoholic infusion. This keeps better than the simple infusion and destroys none of the toxic power of the drug. Its action upon larvae is certain, and not having the disadvantage of chloroform, I think it commends itself as the more desirable drug. The following letter received from Prof. Lugger is interesting:

My dear Doctor,

"Pyrethrum is most effective if blown directly upon such larvae as you mention. If this cannot be done, a strong tea should be made, but in a tightly fitting vessel so that the essential oil contained in the powder—the only substance of value as an insecticide—cannot escape. Or, what is perhaps still better, an emulsion should be made of kerosene oil, into which the powder has been mixed and from which the essential oil is extracted by the kerosene oil. Pyrethrum to be good, should be fresh, hence it is best to buy the brand called "Buhach," which is not imported but grown in California. Pyrethrum which has been kept for some months in a retail drug store is always worthless. As you know, Pyrethrum is made from the dried flower-heads of several species of plants, but chiefly from Pyrethrum roseum and P. cinerariaefoleium, plants native to the mountains of Persia and Dalmatia. Both plants grow well in Minnesota, and should be grown, especially the former, which is also quite ornamental."

"No, Willie, my dear," said the little boy's mother, no more cakes to-night. It is too near bedtime, and you know you can't sleep on a full stomach."

"Well," said Willie, "but I can sleep on my back."

Walker (thoughtfully)—"The doctor said I was to give you iron as a tonic, but I've for gotten just how he said to give it to you."

Mrs. Walker (promptly)—"Are you sure it wasn't in the shape of a wheel?"—Truth.

PAIN.

By E. N. FLINT, M. D., Minneapolis.

Pain is a state of consciousness resulting from the over stimulation of a nerve of sensation either in time or intensity. An ordinary sensation of touch of a degree sufficient to cause a consciousness of pressure, would if continued through sufficient space of time, become exaggerated into pain.

A presure sufficient to produce a conscious sensation of touch would if sufficiently intense sified cause pain.

Any bodily sensation commonly unnoticed or noticed as pleasurable becomes a pain when too long continued or too greatly intensified.

Pain is referred to the peripheral end of a nerve and directs attention to the part supplied by the affected nerve.

In these few words we have an epitome of the whole subject of pain and there is scarcely a phase of it but may be referred to those definitive statements.

To the neurologist the study of pain as a manifestation of nerve energy is peculiarly interesting, and if carefully analyzed it will be found that nearly every phase of disease which comes within his province—except a few confined wholly to the motor nerves—might be classified and tabulated under different varieties of pain.

But aside from all consideration of the subject from the narrow view point of the specialist and with no intention of suggesting any new means or proceedures for its control a brief survey of the subject as a mere matter of speculation may not be without interest to many practitioners.

Pain is so familiar to all of us that from the very frequency with which it is met we sometimes forget what an overshadowing insistent fact it is in our experience.

It is confined within the narrow limits of no specialty and is prominent in all of them.

It sends more people to the doctor than all other things put together. Specialist and general practitioner alike are concerned in reading its diagnostic message and weighing its prognostic value. And after it has served these ends both are equally diligent in controling and subduing it, thankful that he is able to do so.

Indeed it is a matter of self-congratulation to the profession and one of the things that reconciles a man to the threading of devious paths of uncertainty, the doubling on tracks of the qualified diagnosis and the ingenious erection of convenient knot-holes, to be in position to reply emphatically and affirmatively to the tortured cry of "Oh doctor! Can't you stop this pain?"

Even the primal curse, pronounced by God in his wrath upon woman that she should "bring forth children in sorrow" is lightened in these latter days. Every practitioner called to a case of obstetrics carries in his grip a few ounces of merciful oblivion and woman often bears her young lapped in the "thick sweet mystery of chloroform."

The question was pondered by Job and speculated upon by philosophers in ancient Greece and Rome as to why such a thing as pain should have ever had a place in the creative scheme. The question has been asked and answered by the more modern savants, and yet to the finite mind there would seem to be no rational end served by much of the suffering endured by humanity.

One of the mysteries of life is the suffering endured for years by a person suffering from incurable disease.

The delicate intricacy of threads, centers and neurons making possible that pain, serves a purpose so preponderant that without it the race would have perished in its infancy. But why, as in an incurable disease, should it be required of us to suffer a pain which in no conceivable light can be regarded as a conservative factor?

The answer probably lies in the fact that the individual is furnished with an organization at once the result of, and in harmony with his environment, and once being placed in that environment he seems to be no longer of any consequence in the estimate of the creative force.

The individual is nothing, his sufferings a matter of insignificance and merely a tribute to the laws governing existence, while on the other hand the race is everything.

The individual is slaughtered by hundreds and thousands ruthlessly beneath a firmament serene and undisturbed in its unfathomable reaches of world peopled space.

The tornado, earthquake, tidal wave, plague, pestilence and famine wipe out whole communities and there is no sign that mortal eyes can read that any response is ever made to the cry of sufferers who in their anguish would storm the gates of heaven and shake the very foundation of the Great White Throne itself.

He who occupies that Throne sits in awful majesty and guides the destinies of the universe seemingly indifferent to a cry from the individual. The cry is lost in the eternal diapason of the spheres.

But while the individual is created and turned loose on the face of the earth with no provision made against his suffering and destruction, every possible provision seems to have been made for the preservation of the race.

Wherever we turn our gaze; into whatever channel we pursue our investigations we find marvelous provision in force which makes our continued existence a possibility.

The powerful law of self preservation, about the only instinct which evolution has left to man, active always and so universally recognized that he who disregards it is considered a coward or a hero according as he commits suicide or sacrifices his life for others.

The laws of procreation—the sexual instinct, so all prevading that the attitude of the individual towards society and towards life, and the constitution of society in relation to the indivi-ual are both, fixed and maintained with regard to its demands.

And in the same category with these great and fundamental factors tending to conserve the race we may place also pain.

A little reflection only is needed to demonstrate that without pain the race would soon disappear from off the face of the earth.

It enforces good conduct. Good conduct is that alone which enables us to exist in harmony with our environment. But all this granted—granted that it is necessary that pain should have been made possible by the very nature of our organizations or even—as some good people would have us believe—was contemplated in the original scheme as a punishment for our sins, an untenable position by the by) how do we as practitioners stand in relation to it?

Is it not an unending source of pride to us to know that we stand forever armed and watchful to combat this thing? That we are exemplifying that other great law—that what nature has left us unprovided with she has given us brains to secure ourselves?

Is it not a gem in the crown of altruism which the world claims to have placed on our brows, that we have learned means more sure to conquer pain than for the control of any other thing That though men may call in vain to space through the darkness and the night of anguish, the morning of his rest dawns when the physician crosses his threshold? No more "beautiful upon the mountains are the feet of him who bringeth glad tidings" than the neatly brushed and threadbare coat of the doctor whose ability here at least is equal to the compassion that throbs in his heart.

And above and beyond mere physical pain are the loftier pains of that body politic which declares that the proper pursuit of mankind is happiness and straightway proceeds to so fix and establish sociological conditions that there come out of them great misery and unhappiness.

The fierce competition for fame and riches which we have set up for standards; the sin and ignorance abroad among the people; the crime fostered by the nature of our institutions and customs are all pains which we as a body of practitioners have done much, and must do more to help extinguish.

However those are matters pertinent to others besides the physician alone. To him the individual must ever be the chief object of his study and the relief of pain a daily incident in his contact with him as a representative of the race jealously provided for by a Being who has left him in his misery to seek relief at our hands.

CEREBRO-SPINAL MENINGITIS.

By G. D. HEAD, B. S., M. D.

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The mortality records of the City of Minneapolis for the seven months ending with July 31st of last year report 16 deaths from cerebro-spinal meningitis. The number is somewhat in excess of the deaths attributed to this disease in the same period of previous years but does not indicate an epidemic, as some of our medical men believe. The records of the City Health Department show as follows:

Death from cerebro-spinal meningitis for 7 months in

1898.....16	1894.....10
1897..... 6	1893.....14
1896.....14	1892.....14
1895..... 9	1891..... 9

The total number of deaths from this disease as recorded in the city death reports (1887-1897) is 229. Of this number 11 occurred in '97, 21 in '96, 15 in '95, 19 in '94, 21 in 93, 20 in '91, 21 in '90, 28 in '89, 35 in '88, 19 in '87.

From these statistics it will be noted that the death rate in this city from cerebro-spinal meningitis for the last ten years has been remarkably regular for all years except 1889 and 1888. In these years a considerably larger death rate from the disease was recorded. But the number is not large enough to indicate an epidemic, and we are justified in saying that, as far back as the death records of the city are complete, no epidemic of cerebro-spinal meningitis has occurred within its limits.

A question of interest thus confronts us. Is the epidemic form of cerebro-spinal meningitis now present in this city?

In the further study of the death statistics the ages of the patients may be noted. 75 were under one year, 96 between 1 and 5, 16 between 5 and 10, 16 between 10 and 20, 13 between 20 and 30, 8 between 30 and 40, and 5 were over 40 years of age.

As to the season of the year in which the deaths took place, July claimed the most, 22, April came next with 18. November and December record the smallest number, the former 5, the latter 7. These are facts which the records of the city health department furnish us regarding the disease. They are important in the consideration of our subject since they give us knowledge concerning its prevalence, the age at which it occurs, the time of the year in which it is most frequent, and the location of the fatal cases; but there are many facts concerning the disease about which the mortality records are silent. There is, first of all, the question of the varieties of cerebro-spinal meningitis which exist in this city. In the records we find the terms cerebro-spinal miningitis, specific cerebro-spinal miningitis, epidemic cerebro-spinal miningitis, cerebro-spinal fever and the like, all used to designate a disease involving the meninges of the brain and cord. We have noted also that a large number of deaths—605 in ten years—have been assigned to meningitis alone. How many of such cases may not have been cerebro-spinal in character it is difficult to determine; indeed there is good evidence for believing that all forms of meningitis are cerebro-spinal, the membranes of the cord being involved as well as those of the brain. As only a very small percentage of the deaths recorded came to postmortem, it is evident that the differential diagnosis made between these different forms of cerebro-spinal meningitis, if in reality they express different types of the disease must have been based upon clinical evidence alone.

A classification of the varieties of meningeal disease based upon the symptoms manifested by the patient during life is absolutely untrustworthy. There are cases in which all the clinical symptoms point toward the cerebral meninges as the seat of the lesion which postmortem study proved to be cerebro-spinal in character. There are cases in which all of the clinical symptoms point toward the spinal membranes as the seat of the disease which postmortem study proved to be cerebro-spinal in character. An epidemic form of cerebro-spinal meningitis has been recognized clinically, as a cerebro-spinal meningitis, non epidemic in character; but whether the etiology of the two were the same or not, and whether a study of clinical symptoms alone might serve to distinguish a sporadic case of epidemic cerebro-spinal meningitis from a case of non epidemic variety, if such might be in existence, clinical medicine could not answer.

In proof of this statement one need only consult the latest text books on internal medicine. Here, under epidemic cerebro-spinal meningitis, in included the description of a disease which it is stated may be due to the pneumococus of Fraenkel, the diplococcus intracellularis of Weichselbaum or various other bacteria, while in the light of recent evidence the epidemic form of cerebro-spinal meningitis is caused only by one germ—the diplococcus intracellularis of Weichselbaum, and that the cerebro-spinal meningitis caused by other bacteria is not the epidemic form, and has no relation to it. Nor have pathologists been able to make an altogether satisfactory classification of the varieties of cerebro-spinal meningitis. In the latest translated edition of Ziegler under the article on cerebro spinal meningitis are these words: "In a special infective disease whereof inflammation of the cerbro-spinal meninges forms a characteristico feature known as epidemic cerebro spinal meningitis the diplococcus of pneumonia appears to be the ordinary exciting cause."

It is evident that pathologists as well as clinicians have confused the varieties of cerebro-spinal meningitis, and have not been able to distinguish between lesions caused by Weichselbaum's diplococcus and those of the pneumococcus of Frankel or some other bacteria. The true distinction between the varieties of

cerebro-spinal meningitis and the one upon which all classification must rest is one, not of clinical symptoms nor of post mortem gross or minute findings but of etiology.

In the study of the cases reported, the classification, as set forth by Counselman, Mallory and Wright in the Mssachusetts Health Report, has been adopted. With them we recognize as a first variety epidemic cerebro-spinal meningitis, an acute infectious disease involving the pia and arachnoid of the brain and cord in the tissues or exudates of which the diplococcus intracellularis of Wiechselbaum is found. The cause here mentioned and the most distinctive feature of the disease is a micrococcus of feeble vitality growing in pairs, and is seen most distinctively in groups within the leucocytes of the tissues. It grows on Hoeffler's blood serum in whitish round colonies. It decolorizes by Gram's method. The germ stains well with Loeffler's methyline blue and appears as two hemispheres separated by a clear space. By reinoculations of the micrococcus into dogs Weichselbaum reproduced similar lesions. It is found almost exclusively within the interior of the polymorphonuclear leucocytes, but can also be seen in sections of brain tissue. It has likewise been found in the lungs in the complicating pneumonia of this form of meningitis. That this micrococcus described first by Weichselbaum stands in some etiological relation to epidemic cerebro-spinal meningitis is fairly well established by the following facts:

The germ has been cultivated in pure culture from a majority of the patients dying of the disease. Out of 35 cases Counselman, Mallory and Wright isolated this bacterium in 31. And the statement is added, "and this micrococcus was not isolated in any other form of cerebro-spinal meningitis." Peterson investigating an epidemic in Berlin found this micrococcus in twelve cases where post mortems were made. Heubner found the germs in nine typical cases; Jager in 12 cases, Weichselbaum in 6, Kamen in one.

2nd. The germ can be isolated and grown in pure culture.

3d. Reinoculation of the micrococcus into animals has produced a similar disease in the lesions of which the germ has been recovered. The successful reinoculation experiments are however too limited and require confirmation by other observers.

Studied from a pathological point of view this epidemic form of cerebro-spinal meningitis differs from the other forms in that it exhibits a more extensive involvement of the spinal cord and its membranes, and the inflammation is extended along the optic, auditory and trifacial nerves.

In the study of the cases reported by Dr. Hunter in the Medical Dial (January, 1899), one case is classified under this variety of cerebro-spinal meningitis.

The second variety of cerebro-spinal meningitis which we recognize is the pneumococcic form, a specific disease involving the pia, arachnoid of the brain and cord caused by the pneumococcus of Frankel. This diplococcus has been a well established cause of cerebro-spinal meninitis for many years. Netler cultivated it in 16 out of 25 cases, Monti in 4 cases, Counselman, Mallory and Wright in 10 cases. In their series of 10 cases, 8 were secondary to pneumonia, while two were in fractures of the skull with a resulting cerebro-spinal meningitis. The chief characteristics of Fraenkel's pneumococcus are familiar, it being considered the chief cause of pneumonia. Many pathologists have gone so far as to consider this diplococcus as the cause of epidemic cerebro-spinal meningitis. Such a stand does not seem to be in harmony with later bacteriological investigations, and we are justified in considering the two diseases as entirely separate forms of cerebro-spinal meningitis. When we know that the micrococcus of which we are speaking is not infrequently found in the pus of otitis media, in the lesions of ulcerative endo-carditis, and in the buccal and nasal secretions, it does not seem at all peculiar that it should become a prominent cause of cerebro-spinal meningitis, the lymph and vascular channels acting as avenues of entrance. The lesions peculiar to this pneumococcic form of meningitis are: —

(a) The greater amount of fibrin in the fibrino purulent exudate.

(b) The oedema and softening of the outer layer of the brain cortex, with some infiltration of pus cells.

(c) The acute endarteritis of the cerebral vessels.

In the cases reported by Dr. Hunter, three are classified under the pneumococcic form of cerebro-spinal meningitis. To differentiate clinically between the epidemic and pneumococcic forms of

meningitis is a question of extreme importance. Bearing upon this point we quote from Counselman, Mallory and Wright: "In general it may be said that the difference between the clinical history of the pneumococcus meningitis as compared with the epidemic form is in the absence or slight development of symptoms in the pneumococcic form which points to the infection of the meninges of the cord and spinal roots and extension of the infection along the cranial nerves."

Leaving out of consideration the tubercular form of cerebro-spinal meningitis with which this paper does not deal we pass to the consideration of the third variety of meningitis, viz. the streptococcus form. In the Massachusetts Health Report, 8 of the cases were classed under this variety; all were of the secondary form of the disease. Four were secondary to middle ear disease, one complicated an attack of erysipelas of the face. In one case there was endocarditis, and in another an alveolar abscess. In pathological lesions and clinical symptoms this variety of cerebro-spinal meningitis does not differ from the pneumococcic form, and without bacteriological study could not be differentiated from it.

Before closing the subject of classification we should not omit to speak of one or two isolated cases in which other bacteria aside from those previously named have been isolated from the cerebro-spinal exudates and tissues. In one case reported, the anthrax bacillus was isolated, the meningitis being secondary to a carbuncle on the back of the neck in which the same bacillus was isolated. In another case in our own experience the Klebs-Loeffler baccillus was cultivated from the cerebro-spinal fluids by Dr. Wilson.

Passing the subject of classification, a second question which arises in the study of cerebro-spinal meningitis from the public death records is,—how many of the deaths reported as caused by cerebro-spinal meningitis are without question due to that disease and no other? The consideration of this phase of the question calls into question first of all the honesty of the physician making the report. He may be ignorant of the true diagnosis but may write out the death certificate, "cerebro-spinal meningitis," rather than say he does not know. Then another physician may know the cause of death but wishing to make it appear that the patient died of some incurable disease puts down "cerebro-spinal meningitis." Or the physician may have thought the disease to be cerebro-spinal meningitis when first seen, and so have told the friends, but subsequent developments might have caused him to change his diagnosis, and yet rather than admit his error, to have written on his death certificate "cerebro-spinal meningitis." On looking over the death records, the writer has been impressed with the large number of cases reported by a few physicians. Thus 47 cases of the 229 were reported by four medical men. It seems incredible that four physicians should encounter over one fifth of all the deaths from this disease which have occurred in the last ten years in this city, when we remember that there are about 400 medical practitioners.

And, finally, there is the question which must ever be raised, viz. that of accuracy of diagnosis. How many of the deaths, honestly reported as cerebro-spinal meningitis, were that disease and not some other pathological condition? When we note that over fifty per cent. of the deaths recorded are of infants of one year or under, and when we remember how small a number of the diagnoses are verified by postmortem examinations our doubts grow apace. Of the list of diseases with which cerebro-spinal meningitis might be confounded may be mentioned tubercular meningitis, the cerebral forms of typhoid fever and pneumonia, tetanus, small pox and scarlet fever at the outset. The fact that so large a per centage of the deaths reported are in children of one year of age or younger, and that the largest number of deaths seems to have occurred in the summer, when infantile diarrheas are prevalent, leads one to think that doubtless many cases of this character, which end fatally, and toward the close exhibit retraction of the head, Cheyne Stokes respiration, and local or general convulsions have been reported as deaths from cerebro-spinal meningitis, the impression being that the inflammation had extended to the brain. This group of symptoms denominated by Marshall Hall "Hydrencephaloid or spurious hydrocephalus" has been shown not to be due to any recognizable lesions of the cerebro-spinal cultures, and is not cerebro-spinal meningitis. In the first stages of the infection the diagnostician, when in doubt, can call to his aid two valuable procedures which will materially assist him in coming to a right conclusion. These are the use of the lumbar puncture and the counting of the white cells of the blood. The method of making lumbar puncture and its value in the diagnosis of cerebro-spinal meningitis have been considered in the previous paper.

Something however can be said regarding the value of the leucocyte count in diagnosing this disease. All forms of meningitis, except the tubercular, produce a well marked increase in the white cells of the blood. In Cabot's series, 11 cases were counted—the lowest of which was 11200 white cells to the c. m. m.

Counselman, Mallory and Wright report 33 cases counted, the lowest of which was 9350 white cells to the c. m. m. In the cases studied in this city 4 were counted which the post mortem evidence verified as cerebro-spinal meningitis.

Case 1st. White count, 18000. Case 2nd. 24000. Case 3rd. 23000. Case 4th. 16300.

Some medical men speak of the difficulty in distinguishing between cerebro-spinal meningitis and some cerebral forms of typhoid fever. The leucocyte count will in every instance determine the correct disease.

Not many years ago the profession satisfied itself with the diagnosis of peritonitis without much regard to causation or pathological condition. Such a diagnosis will not at the present time be recognized by medical men. We must know the kind of peritonitis, whether septic or tubercular, and we must insist upon the source of the infection being determined, whether a perforated appendix or a ruptured fallopian tube, intestinal obstruction, or a perforating ulcer of the stomach or ilium. May we not, now that more light has been thrown upon its etiology and pathology, look upon a diagnosis of cerebro-spinal meningitis as non acceptable until the character of the meningitis, and the source from which the infection originated have been determined.

NEW METHOD OF DISINFECTION.

Drs. Walther and Schlossmann give the following details of a new method of disinfection: By means of a specially constructed apparatus a mixture of formaldihyde and glycerine is sprayed into a room which is to be disinfected, until a thick fog results; about four pounds of the mixture are needed for 1,000 feet. The room need not be hermetically closed during the operation, as the ordinary circulation of air assists in spreading the disinfectant, and in enabling it to reach remote corners. Three hours' exposure was found sufficient to kill all germs in the rooms experimented on, though the test objects were purposely chosen of the most refractory nature.—Prakt. Chem.

RETINAL HEMORRHAGE.

By J. P. THORNE, M. D.

Attending Physician Palmer Memorial Hospital, Editor Wisconsin Medical Recorder, Jaynesville, Wis.

The frequent occurance of retinal hemorrhage and the fact that it is readily recognized by opthalmoscopic examination, make the subject worthy of consideration. More or less retinal hemorrhage occurs in most diseases of the retina but it also occurs as an independent condition.

The cause of the hemorrhage is a very important matter to determine, as treatment must so often be devoted to the disease which is back of the hemorrhage. In the majority of cases the walls of the vessels are in a weakened condition which makes the hemorrhage possible. Sometimes a thrombosis or embolus occludes a vessel and prevents its proper nutrition so that a slight strain ruptures the vessel. Hemorrhage occurs in some of the inflammatory diseases of the retina of which they are partly diagnostic. Injuries of different kinds cause retinal hemorrhage, the vesels being ruptured by direct violence, when the walls are weakened. Strains will produce the hemorrhage, such as unusual exertion of any kind, heavy lifting. The pathological relaxation of the walls of the vessels enables hemorrhage to occur per diapedesis, the blood corpuscles escaping through the relaxed walls. Retinal hemorrhage may result from diseases of the heart, liver, spleen and kidneys; pyaemia, septicaemia, ulcerating endocarditis; anaemia, haemophilia, purpura and scurvy, Bright's disease, diabetes, and gout. It occurs sometimes during pregnancy and in menstrual disorders. The diagnosis can be readily made by means of the ophthalmoscope. The classification of Dimmer nicely summarizes the causes: (A) Hemorrhages caused by changes in the composition of the blood and the tissues of the bloodvessel walls. (B) Hemorrhages caused by disturbaces in the circulation. (C) Hemorrhages caused by sudden reduction of the intraocular tension.

Treatment frequently consists mainly in treating the condition which causes the hemorrhage. Often treatment is not successful and then again in some cases, it is satisfactory. A solution of pilocarpine or eserine may be dropped into the eyes. A mild pressure bandage is recommended by some but I have never had any

great benefit from it. The eyes should not be used in any way but kept completely at rest. The internal medication must be governed by the general condition. Cardiac sedatives, ergot and pilocarpine are of use. Later the alteratives are indicated, iodide of potassium, and brown iodide of lime are the ones I have generally used. My method of treatment is rest, myotics, ergotin and later, the iodides.

The following cases from my practice are illustrative:—The first case a man of 28 years of age, unmarried came to me from a sudden failure of vision, which upon ophthalmoscopic examination proved to be retinal hemorrhage. Both eyes were affected and vision was 20-200. An examination of the patient at once revealed a case of Bright's disease, so far advanced as to make his death only a question of time. He was sent to his family physician and the termination, which could not have been otherwise, in death, came in a few weeks. The curious part of this case was that the man gradually accustomed hiself to the inconveniences of his disease and did no call upon the physician for aid. The failure of his sight, being the only thing which brought him to a medical man.

The second case was a married man about thirty years of age who suddenly found the vision of his right eye defective. The vision was and upon examination was found to be due to retinal hemorhage.

The man was of a phlethoric type and for some reason the vessel wall was weakened so as to permit of the hemorrhage. The attending physician, who referred the case to me, was requested to make a thorough examination of the patient, but no organic lesion was found. The patient was given a collyrium containing pilocarpine and put upon ergotin and later he was placed on potassium iodide. This treatment resulted in entire recovery of the eyes with vision 20-20.

Attorney (examining witness.—"You say you saw the shots fired?"

Witness.—"Yes, sir."

"How near were you to the scene of the affray?"

"When the first shot was fired I was about ten feet from the shooter."

"Ten feet. Well, now, tell the court where you were when the second shot was fired."

"I didn't measure the distance."

"Speaking approximately, how far should you say?"

"Well, it approximated to a half a mile."
—Texas Sifter.

LUNG GYMNASTICS.

Direct gymnastics for the lungs, to increase their capacity and elasticity, are almost a safeguard against consumption if taken in time.

Dr. Otis in the Therapeutic Gazette advises people with weak lungs to stand erect in a well ventilated room, place the hands on the hips and take long, deep, slow breaths, varying the rhythm, and at times taking short, jerky breaths for variety. The breath should be drawn only through the nose.

Better yet, combine exercise with the setting up drill or other arm exercises. Dr. Otis gives these exercises, to which others might be added:

1. Slowly raise the arms from the sides until they meet above the head, breathing deeply. Breathe out while slowly lowering.

2. Raise the arms in front; carry them as far back as possible; then down. Breathe as before.

3. Slowly rise upon the toes, breathing deeply.

4. Extend the arms in front: carry one leg back as far as possible.

5. Lie on the back; raise the arms backward and over the head, while breathing deeply.

People with plenty of lung capacity can stand even bad air without suffering.

It is well known that women, whose lung capacity is interfered with by corsets, are much more apt to faint in close, ill ventilated rooms than men.

An American physician writing from Berlin of medical affairs and particularly of the inferior position of American graduates as compared with those of Germany—due mainly, of course, to their longer courses and greater thoroughness—says: "Although America now is fast approaching the foreign standard of excellence and thoroughness in medical education, it will be some time before the slow-witted Teuton will admit that anything American is as good as the German article, but the quickest way to teach him the supremacy of America, is not to keep sending over here our medical men to study in his schools after they have finished with ours. Give our doctors better facilities and advantages in our own large cities. * * * Let our professors become famous by original research and experimentation, by clever operating and brilliant diagnosis, and we will not see our students going abroad to finish their education and be snubbed by their German cousins.'
—Clinical Review.

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FEBRUARY, 1899.

COLONIES FOR THE INSANE.

To provide accomodations for the constantly increasing number of the chronic insane of Minnesota, the Board of Trustees of the hospitals have recommended the establishment of colonies for suitable cases, to be located within convenient distances of the present institutions for ready communication and careful supervision. This would be the quickest and most economical provision to relieve the present crowded condition of the hospitals, and would postpone for a time, at least, the necessity for the building of a new and expensive plant; it would be a much better plan than to turn over the chronic cases to the tender mercies of the several counties for care and treatment, and the cost per capita would be less. If this suggestion of the Trustees is not adopted in full, there is one class of patients, which from necessity has been admitted and kept in the wards of the hospitals among other classes of the insane, that could be removed much to the relief of the institutions, and greatly to the advantage of the patients themselves; and this is the class of epileptics. They are out of place in the wards of the hospital among quiet persons of sensitive nervous organizations, and yet their condition for much of the time may be such as to make it difficult to exclude them from the privileges of the social enjoyments that are permited to the better class of patients and convalescents. New York, Massachusetts and some other states have wisely arranged for their epileptic cases by separate provision. The Craig colony established at Sonyea, New York, is one of the most cheering advances that has been made in this country in behalf of the care and treatment of the insane. They have provided a home there for the epileptic class where they can enjoy great liberty and yet make themselves useful to the extent that when the farm is fully developed, and the workshops for the several industries prepared, the colony will approach self-support. The income from the farm last year exceeded $18,000. On the 30th of last May there were 270 inmates, and 550 applications on file for admission. The great advantage of treatment in such a colony is the larger outdoor liberty enjoyed compatible with safety. The benefit of outdoor life is well illustrated by the report of the superintendent that on rainy days when the patients were confined in the houses the number of fits was doubled.

If Minnesota should establish such a colony on a farm of ample dimensions, now while land is comparatively cheap, and permit the admission of paying boarders from other states in the northwest, as a result there would be a great relief to our insane hospitals, a financial advantage to the state and also a great benefit to many families suffering from the presence of afflicted members.

The Wisconsin system of providing for the chronic insane, however well it may answer the needs of that state, is not one to be recommended for adoption by Minnesota in its present stage of development; the population it too much scattered, except in a few counties, and those are now well accomodated by the three hospitals already established. And it is a question if Minnesota is ready to follow the lead of Wisconsin in this mater under any circumstances. Is that system the best and the most economical that can be devised? That it is not an unmixed good (as some seem to think) may be inferred from a criticism made by one competent to judge who visited the several county institutions last winter and reported his findings in the Journal of In-

sanity, October, 1898. He sums up his objections to the county asylum system as follows:

"1st. Absence of the hospital idea.

2nd. Lack of medical oversight.

3rd. The inadequate care of the patients, particularly of the filthy and feeble classes and epileptics.

4th. Lack of sufficient attendants, which necessitates patients remaining too much indoors, particularly in the winter time.

5th. Lack of standards of care prescribed and enforced by central authority, superior to politics, as shown in the extreme variation in per capita cost and differences in beds, furnishings, attendance, etc.

6th. Lack of efficient state supervision.

7th. Frequent lack of discriminating local supervision, this due chiefly to absence of knowledge of the requirements of the insane and the desire to make favorable financial showings to Boards of Supervisors."

So much for what is said as to the system as the best yet found; and how is it as to the economy claimed? The same critic gives average cost per capita for the acute and chronic in Wisconsin, per week, for the year ending Sept. 30th, 1897, as $2.65-100, while at theToledo State hospital, Ohio, a cottage plan, and acknowledged to be in the front rank of hospitals for insane as to care and treatment, and where both acute and chronic cases are treated, the cost for support for the year 1896 was $2.61-100. Comment as to economy is not necessary.

WHAT IS IT?

Minnesota has hitherto borne the proud distinction of having laws which secure a high standard of medical education, and protect the public against illiterate, unprincipled and irregular practitioners. The fair name of our state is now threatened by the proposed passage of a bill to legalize and protect one of the most absurd and mischievious fads which have ever been foisted on a credulous public. This so-called "system" of treatment is called "osteopathy." What is it? Let the founder of osteopathy, A. T. Still speak for himself.

"I feel to answer through the Journal of Osteopathy questions that are asked by thousands of persons annually. And as time adds days and years the number of persons who ask those questions have multiplied to such greatness in numbers that is absolutely impossible to find the time to answer them in detail. And I am not sure that I can answer all of them through the Journal, but will try and so arrange that a few of the most common ones will be answered as best I can. By my method of reasoning I arrive at the conclusion that man was, after receiving his form like unto the world on which he dwells, and that in his body could be found all the mineral, vegetable, and animal substances that could be found in the beast of the field, the fowls of the air, fishes of the sea both great and small, in short, all that was contained in this and all other planets and beings, from the throne of God (Himself included), to the lowest form of animated beings; that in the human being all attributes of mental and physical were represented in kind. With this conclusion I proceeded and did obtain what I have proclaimed and proven to be truths universal in kind and action, submitting to and being governed by one common law. I reasoned that all effects as are shown in disease with the result of the productions of the truths of the one great common law, mind and motion expressing themselves through matter. Motion is an effect of life with its powers. Disease in any form or presentation was another effect. Conception of beings, diseases, and worlds, were the biogenic answer of the wombs of nature either large or small, believeing while I was in the chambers of sober and intelligent nature where honest reason only can dwell, that it was safe to follow the teachings of that principle that made no mistakes that I could detect. * * * The world's systems of cures by drugs are now and always have been based on three principles, namely: opiates, purgatives, and stimulants. And the difference there is in the schools of medicine are about all told in the quantities to be given. All give deadly poisons but try to get the same results. Allopathy starts the ball to rolling by big pills, eclecticism the same, but claims that vegetable medicines are better than mineral preparations. Then the homœopath closes by pills of less size, and if they fail he drives morphine under the skin and spills it in the fascia, which carries the opium to the brain and produces effects by paralyzing sensation. And on these three principles all depend."

Perhaps the reader can comprehend Mr. Still's meaning, we confess, we cannot.

The author of "A cheap cure for appendicitis" appears to be a little foggy regarding his collegiate appointments and hence the secretary

of the College of Physicians and Surgeons of Chicago has written the following letter to the editor of the Medical Record.

"Sir: In the Medical Record of Dec. 17th, there is an article entitled 'A cheap cure for Appendicitis' by T. J. Hutton, M. D., of Chicago, who includes among his titles that of professor of diseases of the mind and nervous system in the College of Physicians and Surgeons of Chicago. The only professor of diseases of the mind and nervous system that the College of Physicians and Surgeons has ever had is Dr. Oscar A. King, the present incumbent. Dr. Hutton is not a professor in that college, and is in no way connected with it.

We beg to ask room in your columns for this correction."

(Signed) Wililam Allen Pusey, M. D.

REPORTS OF SOCIETIES.

HENNEPIN COUNTY MEDICAL SOCIETY.

A stated meeting of the Society was held in the Public Library, Minneapolis, Jany. 9, the president, Dr. Nippert, in the chair; Dr. F. A. Knights, secretary.

Dr. B. M. Behrens reported cases of ruptured drumheads and exhibited carefully prepared colored drawings, showing the results of treatment.

Dr. J. W. Macdonald presented a calculus which had apparently passed down the ureter, lodged behind the prostate, set up an abscess and finally ulcerated through the recto-vesical wall, from which the patient picked it out with his finger nail, and obtained complete relief.

Dr. W. A. Jones read a paper on "Influence of Mind Upon Disease with Reference to Fakes, Fads and Fancies." (See page 65.)

Discussion:

Dr. J. H. Dunn expressed surprise that the author advocated examination for the faddists, since we cannot get a law compelling them to appear before the State Medical Examining Board, while a board of their own is just what they are trying to secure. He considered it remarkable that he had not met any instance of cure by "Christian Science," though he had seen many cases to which some such treatment would seem to be adapted. In his observation the fads do not cure. Many diseases are self-limited, and a natural recovery is often credited to "Christian Science" or one of the other fads. There are two classes of such patients; those who follow every new fad and never recover, though they are always "being benefitted." He recalled one case of carcinoma of the stomach, said to have been cured by "Christian Science," but which was not cured or changed in any way, but died of cancer. Another patient travelled with a quack until the day before his death, exhibiting a cancer which had been removed by the quack.

2. Those who are honest and think themselves cured and sometimes are benefitted.

Dr. F. A. Dunsmoor thought the fads were sometimes helpful. Mind has a tremendous force, as instanced by the fact that fear may produce death, and courage overcome superior brute force. The careers of patent medicine fakirs show how easily testimonials can be secured. It is so with "Christian Science"; the public knows nothing of their failures, but is kept well informed of all successes, whether natural or otherwise. We should see to it that the disastrous results of "Christian Science treatment" should be made public.

Dr. J. H. Stuart said the paper was very suggestive and the subject difficult. The line between real and fancied disease is hard to determine. Some diseases are real and have typical signs and courses; others are purely imaginary. Much of the lack of mental balance shown by those who follow fads is referable to a mistaken philosophy of life and lack of training in logical thought. If children were not led astray, wrongly developed by tyranny on one hand and the cultivation of egotism on the other, many of the neurotics might be eliminated. We as a profession are not blameless; reasoning is not always logical; our remedies do not always bring results. He did not wonder that the people run to the faddists, since there are so many in our own profession.

Dr. A. W. Abbott. Thre hundred years ago barbers were surgeons and doctors, and it is only in the past fifty years that medicine and surgery have been studied clinically. It is not strange that medicine is not a perfect science. We cannot cure everything and we should be honest in saying so. We should seek to educate ourselves and are rapidly doing so. The fads do us no harm; they come and go as they have always done and do not affect us.

Dr. C. H. Hunter brought up two considerations, the advisability of obtaining legislation to include the fads, and the stand to be taken for the notification of contagious diseases. "Christian Science" has been for ten years a progressing cult. Its leaders will not weaken while their incomes continue to be large. They defeated a bill directed against them in the Massachusetts legislature. The Health Department can and does prosecute regular practitioners for not notifying contagious diseases and others should be liable and prosecuted in the same way.

Dr. Staples suggested that we take the motes out of our own eyes. If a patient does not need medicine we should say so plainly and not at-

tempt to treat him in that way. We cannot drive fakirs out by law.

Dr. Jones closed the discussion.

Dr. J. W. Macdonald presented to the Public Library, through the Secretary, a copy of his work—Sugical Diagnosis and Treatment. Dr. Hunter presented in the same way the volumes of the Journal of Experimental Medicine.

A vote of thanks was extended to Dr. Macdonald and Dr. Hunter.

Progress of Medicine.

MEDICINE.

UNDER THE CHARGE OF
J. W. BELL, M. D., C. H. HUNTER, A. M., M. D
J. H. STUART, A. M., M. D.
DAVID OWEN THOMAS, M. D., M. R. C. S.

EARLY DIAGNOSIS OF TUBERCULOSIS.

By early diagnosis is not meant here the early stages in which the physical signs, as revealed by percussion and auscultation, are more or less definitely marked, but a stage even antecedent to this—a true incipient stage in which the tubercular symptoms are just beginning. This stage may, and often does, antedate the so-called incipient stage in which a careful and skillful examination may discover the beginnings of tubercular infiltration in the tissues of the lungs. It has been claimed that the lungs, destined ere long to become the seat of tubercular infiltration, may manifest a want of tone or elasticity in their action even before any physical data indicating the coming mischief can be obtained; but if that view seem too intangible to be reckoned upon, there are other signs that are of great moment and are to a greater or less degree open to recognition. It is upon this that stress is to be laid in the matter of an early diagnosis.

Dr. V. Y. Bowditch of Boston, (Boston Med. & Surg. Journal, November 17, 1898), says: "It is a comparatively easy task to make the diagnosis of pulmonary tubercular disease, even in the early stages, where the physical signs are definitely marked and the general symptoms are those so familiar to us all; but in those cases in which the signs, such as dullness on percussion, changes in the respiratory murmur and even rales are lacking, our powers of diagnosis and prognosis are often taxed to the utmost. It is in these latter cases that I have frequently found that the general practitioner has not paid sufficient attention to what I deem the most important symptoms, namely, the quality of the pulse, the temperature, and condition of the digestive organs. * * I have been obliged in certain cases to give a very grave prognosis and have been unable to receive them as patients at the sanitarium (strictly for the incipient form) simply because a weak, rapid pulse, more or less elevated temperature and poor condition of the stomach tell me that there is without doubt disseminated tubercular disease, even in the lungs, which renders the case a most unfavorable one for treatment, because of the dissemination of tubercle without breaking down of tissue. * * * The importance of recognizing the unfavorable character of such cases cannot be overestimated, for it may make all the difference in the world to the poor patient as to whether he shall be advised to go to Colorado or other distant health resort with the chance of aggravating some of his most distressing symptoms, or, better, advised to make a less radical change and remain nearer home and friends."

Dr. Bowditch in summing up on this subject, says: "A rapid, feeble pulse, fluctuating temperature, dyspnorea, a pasty or dusky complexion and poor digestion are symptoms very frequently, if not usually entirely inconsistent with a truly incipient form of pulmonary disease even when the physical signs in the chest are very few or even entirely lacking under the ordinary method of examination by anscultation and percussion."

Dr. H. P. Loomis of New York, in a paper on the "Pretubercular Stage of Phthisis," likened it to the stage of transient albumenuria found in a case developing nephritis. While a majority of tubercular patients apparently start with local manifestations a large number have exhibited for a longer or shorter time well-marked evidences of an antecedent morbid condition of the general system."

"Dr. Loomis believes that chloro-anemia is often one of the most pronounced symptoms of the pretubercular stage of phthisis. In tubercular chloro-anemia the hemo-globin never falls so low as in true chlorosis. Digestive troubles precede the deposition of tubercles in many cases."

Dr. Francis H. Williams of Boston, read a paper before the association on climatology on the clinical use of the "X Rays," and it was discussed with reference to its value in determining tubercular infiltrations. Striking testimony was given of its value in this direction. Dr. F. I. Knight of Boston, felt confident that the fluoroscope is a very important addition to our armamentarium.

Dr. J. E. Stubbert stated that with the fluoroscope he could distinguish a very slight haze at the top of one lung. The disseminated form of tuberculosis is more easily demonstrated by this means than by the ordinary methods. Pleurisy with effusion is easily mapped out.

In this connection it may be insisted upon that too much emphasis cannot be placed upon the fact that the most important question bearing upon the treatment and management of a case of tuberculosis is the one of making an early diagnosis. This must be manifest if we will remember that by the time the physical signs of dullness, of softening, of cavities, of

rales characteristic of the more advanced stages are observable, the extent of dissemination of the bacilli and amount of mischief already done put the disease beyond the help either of medicines or of change of climate. In a word it is the condition of the patient antecedent to the existence of the grosser effects of the disease that commonly send the patient to the physician's office for treatment that must receive our closest attention and most skillful management before we shall ever be able to boast of much success. The advanced cases must be cared for, but the incipient only can be cured.

But at present, for obvious reasons only a very limited number consult a physician at this important stage. It will be very different when the laity are impressed by a lively appreciation on the part of physicians themselves of this fact.

If what is said here be true, then the question of diathesis, inherited tendency, predisposition, soil, and kindred terms are not without significant meaning.

SURGERY.

UNDER THE CHARGE OF

J. H. DUNN, M. D., W. A. HALL, M. D.
KNUT HOEGH, M. D.

SUTURE OF CARDIAC WOUND.

Dr. Parlevecchio (Lancet, September, 1898) reports the successful suture of wound of the heart.

The patient had been stabbed in the left fifth intercostal space, but walked some 200 yards to the hospital. Five hours later there was left pneumothorax with extensive intraplural effusion of blood, increased area of cardiac dullness, confused apex sounds—distant at the base. Eight hours after the injury, suspecting wound of the heart or at least of the pericardium, Parlavecchio freely opened the fifth intercostal space and much blood was evacuated from the plural cavity. Then resecting the fifth rib, a wound of the pericardium was found. This was enlarged so as to expose the heart, in the apex of which a V-shaped wound 1½ inches in length was discovered. It penetrated the left ventricle and discharged blood intermittently. This was closed with four interrupted silk sutures. The pericardiac and intercostal wounds were then closed.

The operation took about 40 minutes. The patient left the hospital, cured in 38 days. The author explains the survival for eight hours before operation, by supposing the wound to have been temporarily plugged with clots which were displaced during the anaesthesia.

This is said to be the third successful suture of cardiac wounds.

THE RADICAL CURE OF HERNIA.

W. J. Mayo ("The Annals of Surgery" for Jan.) under "Remarks on the Radical Cure of Hernia," regards over preparation of the skin by prolonged green soap poultices, bichloride packs, rough scrubbing, etc., as favoring suppuration, and since he has abandoned this method for less severe cleansings, carried out on the morning of the operation and repeated just before it, he has had almost constant aseptic healing. He prefers Bassini's method to Halstead's. because the scar tissue lies in a single plane in the latter while the former divides the necessary scar tissue into different planes, giving a stronger wall. He also prefers cat gut sterilized by Boeckman's method, for suture material.

He reports 164 inguinal operations, with five relapses; 16 femoral with no relapses; 7 umbilical, 1 relapse; 9 post operative, 1 relapse.

APPENDICITIS.

Dr. T. J. Hutton (Med. Rec., Dec. 17th) contributes "A Cheap Cure for Appendicitis."

The paper is chiefly notable from the fact that such writings are taken seriously, and extensively quoted by the lay press, and tend to prejudice the public against rational medicine and surgery, much to the injury of all concerned. Such articles on account of their sensational character are especially attractive to the lay press, and as usual this one has already been widely quoted in our dailies.

The author is quite well known in Minnesota, and if our memory serves us, he used to conquer diphtheria some ten years ago with the same ease and dispatch, before our State Medical Society.

His "Cheap Cure for Appendicitis, and all the other belly aches for which men now operate," is free calomel and soda purgation, supplemented by hot applications, to be followed by a saline if action is too slow." Among other profound reasons for the faith that is in him, the author relates: "I recall one little formula alone taken from Vogel on Diseases of Children, 28 years ago which certainly has been well worth from $5,000 to $10,000 cash to me." It is certainly gratifying to know that the author has found this formula so profitable, but it is difficult for the ordinary mind to see the bearing upon the very important question of the best management of appendicitis. Of course, would-be surgical writers have contributed a great deal of froth and foam to the literature of appendicitis, but for richness of diction, absence of dignity, freshness and range of imagination, and a general firing into the air, a certain type of articles devoted to the non-surgical treatment, must be awarded the medal.

Appendicitis is a serious subject for the patient and his responsible attendant. Certain irresponsible persons have long persisted in treating it as a gruesome joke. It is about time that random talkers were excluded from the debate, and those wishing to discuss either side of the problem ought to be required to preserve some semblance of scientific methods and assume some dignity of demeanor in order to

receive a hearing. The fellow who talks about "all cases of appendicitis being split open" or not split open, of getting "his cutting machines" etc., is getting a little tiresome. He is not to be blamed, for it is his way, but the question is, why do medical editors publish such effusions? Is it because their patrons desire "hot stuff?"

BOTTINI'S OPERATION.

In the Medical Record, Jan. 14th, Willy Meyer contributes his "Personal Experience with Bottini's Operation for the Radical Treatment of Hypertrophy of the Prostate."

He reports in detail his twelve cases, together with a tabulation of 164 cases, by 18 operators showing:

Cases	164
Cured	80
Much improved	44
Little or no improvement ...	26
Deaths—directly or indirectly due to operation	8
Deaths—independent of op...	6

The author states that he approached this method with much skepticism, but has been greatly surprised and pleased with the results.

Under "Indications," he says age is no bar; patients of 90 have been sucessfully treated. The condition of the bladder is not a contra-indication, but when purulent cystitis exists, irrigation and internal administration of urotropin and salol are indicated. Complicating pyelitis increases the danger, of course, of any form of local interference, but is not a contra-indication. In his opinion it makes no difference whether the enlargement be connective tissue, hyperplasia or adenomatous conditions of the glands. He would advise every patient with non-complicated prostatic enlargement so far advanced as to require self catheterization, to submit to this method. Only in patients with very large, soft, and easily bleeding prostates, he would precede the Bottini operation about two weeks by a ligation of the vasa deferentia, with the view of depleting the gland, relieving its engorged veins and hence reducing the danger of far reaching thrombosis and pulmonary embolism.

He also insists upon the great importance of studying the case with the cystoscope before performing Bottini's operation and selecting the location where the incisions will do the most good; but especially in order to exclude the presence of latent stone. He advises operation with the bladder filled; the knife at white heat, operated very slowly, and to make three or four cuts, their angles to be determined by previous cystoscopic examination. The length of the incisions depends upon the size of the gland.

As to the treatment, unless there is retention, the author regards absolute non-interference best, excepting only such general measures as anodynes, urotropin and salol. In case of retension of the urine, a catheter is left in for two or three days. J. H. D.

PEDIATRICS.

UNDER THE CHARGE OF

H. B. SWEETSER, M. D. J. P. BARBER, M. D.

TYPHOID FEVER IN INFANCY AND CHILDHOOD.

J. P. Crozer Griffith (Phila. Med. Jour., Oct. 15th, 1898,) after quoting statistics by numerous authors showing the rarity of typhoid fever in infants under two years old, as well as some others tending to the opposite view, says he is more and more convinced that typhoid fever is far more common in infants than we have any idea of, and that our failure to recognize it is partly due to the fact that we have not sought for it at this early age, and partly because the symptoms are not so characteristic. Prof. J. Lewis Smith expressed essentially this view in one of his latest medical contributions, and the tone of Henoch's writings is in accordance therewith.

Not only are infants not spared by typhoid fever but the disease may even attack the foetus. This would be expected, since it has been found that other infectious diseases, such as pertussis, variola, rubeola and malaria have been contracted before birth. Since the discovery of the Eberth bacillus a number of cases have been recorded in which the bacillus was found in the blood and organs of the foetus, born of a typhoid mother.

The Widal reaction has been obtained with blood of a child at the eighth month, born of a typhoid mother, as reported by Chambrelent and Saint Phillippe, and last spring he had the opportunity of observing and publishing a similar case (the Reviewer reported a similar cise in Nov., 1897). Other cases have been reported in which no such reaction was to be obtained. Conclusions cannot be drawn in the present state of our knowledge; but the failure of the reaction in some cases and its presence in others, together with the presence of bacilli in the tissues of some cases and its probable absence in others, points rather to the production of the agglutinating principle in the foetus itself, only when the germs are present there, than to its passage through the placenta. If this is correct, it would seem to mean that a new born child with the Widal reaction must have had typhoid fever while still in the body of the mother.

The principal feature of typhoid fever as usually sen in children—but of course with numerous exceptions—are an indefinite and uncharacteristic onset, a much greater mildness of the attack, a distinct tendency to a shorter course, and a disposition for the nervous symptoms to overbalance intestinal manifestations. It hapepns oftener than in adults that the disease begins suddenly, and that in the course of a few days the disease is in full swing, and even that the characteristic spots may be present. This is partic-

ularly prone to be true of young children; yet more commonly the onset is so slow and so insidious that this, with the mildness of the attack, renders it impossible to decide just when the child was taken ill.

The respiration shows nothing unusual. It is accelerated of course in proportion to the degree of fever. Epistaxis is probably not as common as in adults. Frequently there are coarse rales in the chest, and cough is a common symptom. The pulse, as in adults, is not infrequently slower than the normal temperature-pulse ratio calls for. This is especially true during convalescense.

The temperature, when typical, is as in adults but it tends to vary from this greatly. It may rise suddenly. Often it runs a most irregular course, especially in infants. During the acme of the disease the temperature often remains high with but little variation between the morning and the evening elevation.

The remittent type, so characteristic of the last portion of typhoid fever in adults, is likely to be absent or greatly curtailed in children. According to Morse's statistics the remittent character is absent in about half of the cases. The temperature may even fall almost by crisis. After reaching normal it may be temporarily elevated again by entirely insignificant causes. Abortive types of the disease are common in children, the fever lasting sometimes not more than a week. The total average duration is certainly shorter in children than in adults. Roughly speaking, it averages from 14 to 20 days; sometimes in severe cases it is decidedly longer. Walberg found the average duration of pyrexia 14 days in 28 cases in children under 5 years of age, and 17 days in 249 cases in children from 5 to 12 years of age.

Although, as stated, the nervous symptoms are prone to overbalance the intestinal symptoms yet in the great majority of the cases they are insignificant. Headache is quite common, especialy at the outset; but even then it is likely to be slight and to disappear soon, and many children remain throughout the entire attack in the best spirits, and evidently do not feel at all ill.

There is not infrequently slight delirium, especially at night, or sometimes screaming in young children. In severe cases delirium may become very pronounced. A decided degree of apathy is sometimes noted. But the extreme apathy, the subsultus, the stupor, the coma-vigil and coma, which are so common in adults, are rarely seen in children. There is a form of nervous disturbance oftener present in children than in adults, viz., a condition resembling meningitis very closely.

With regard to the typhoid roseola, the claim is often made that it is much less likely to occur in children than in adults, and that it is not so well developed in the former. In the writer's own experience it appears to be just as frequently present in childhood as in later life. In the 671 cases of typhoid fever in children collected by Morse, roseola was found in 406, or 60 per cent. Baginski thinks the eruption seldom absent, and the spots were absent in only 19 of Henoch's 381 cases. The occurence of a desquamation in infants with typhoid fever has been reported in a number of instances by Weil and others.

Enlargement of the spleen is always present, but not always discoverable. Statistics indicate that it can be detected in about 80 per cent or 90 per cent of all cases in children. Drying of the tongue is much less common than in adults. Vomiting is a frequent initial symptom. Even later in the attack vomiting is more common than in adults. Obstinate, uncontrollable vomiting sometimes occurs. The condition of the bowels is variable and appears to bear no relation to the severity of the disease. Constipation is about as frequent as diarrhea. Intestinal hemorrhage in children is exceeding rare, and when it does occur it is generally but slight. It is particularly rare in children under 10 years of age. The infrequency of this symptom is due to the slight development of the intestinal lesions. Upon the same condition depends the rarity of intestinal perforation.

In the diagnosis we, usually, do not have in children such a well marked group of symptoms to depend upon as in adults, and we must sometimes reason by exclusion, especially in infants. A continuous elevation of temperature without any local lesion to account for it, and without the demonstrable presence of any other disease, awakens a strong suspicion that typhoid fever is present. Of course there occur in children cases of "simple continued fever," as it was formerly called for want of a better name—cases in which fever lasting from one to three weeks develops without discoverable cause. No doubt, many cases that have been described as fever of this sort were really instances of typhoid fever. We must carefully exclude meningitis. Time will help us greatly in this matter, for typhoid fever rarely if ever goes on to the production of the symptoms of the later stages of meningitis. Enterocolitis has its own characteristic symptoms which will finally make the diagnosis clear in nearly every case. (I cannot agree with this last statement, as several of my cases which have shown a Widal reaction and have had other marked symptoms of typhoid fever have run a course almost identical with that of an ordinary enterocolitis). Malaria can be recognized by an examination of the blood. Influenza, when not of the nervous type, may cause some trouble in diagnosis; but, as a rule, it has distinctly characteristic symptoms. Especially in infants, we must keep in mind the possibility of obstinately disordered digestion. In all these conditions, however, careful watching, as time passes, will help us to a true decision. Of course, there will be many mistakes; but it is manifestly wrong to exclude the possibility of typhoid fever in young children because we fail to find roseola or en-

largement of the spleen, inasmuch as we follow no such absolute rule in adults.

The occurence of the diazo-reaction in the urine is of some value. The Widal reaction with the blood is, in the opinion shared by nearly all observers, a most valuable proof, and the discovery of the bacilli in the excretion is an absolute proof.

The pathological anatomy of typhoid fever in children has certain distinct characteristics. The mesenteric glands are nearly always much swollen. There is, as a rule, much less tendency than in adults to the production of ulcers in the intestine. The process is rather a hyperplastic one, the solitary and agminated glands assuming a redish or pinkish color, and projecting somewhat toward the lumen of the gut. It is probably owing, in part, to this lesser degree of intestinal involvement that the disease is prone to run a shorter course in children, and the temperature to drop more rapidly. Yet some degree of ulceration is not infrequent. This, however, is usually superficial. It must be borne in mind that many diaorrheal affections in children, and especially in infancy, are prone to exhibit after death swelling and ulceration of the agminated and solitary glands, and that the diagnosis of typhoid fever cannot be based upon these findings alone.

Relapse would appear to be about as frequent in childhood as in adult life. Of complications and sequels, may be mentioned otitis, which is more common in children than in adults, and nephritis, which is, probably, much less so, although small amounts of albumen in the urine are not rarely found. Chorea follows not infrequently. It is generally agreed that aphasia is a much more frequent sequel than in adults. Usually it is only temporary. On the other hand temporary post typhoid insanity, quite often seen in adults, apears to be decidedly uncommon in child-hood.

The prognosis of typhoid fever in children is, on the whole, good; much better than statistics would indicate, since so many of the milder cases are never recognized. The rate of mortality seems to increase with the age, children under 5 years being less likely to die than those above it.

Medical treatment is purely symptomatic as in adults, and less often needed. Rest in bed is required, a milk diet is to be preferred. No purgatives should be given to overcome constipation, enemata being employed in place of them. With regard to the use of the bath, careful judgment is to be employed in giving it to children. Certainly there is, as a rule, for no period of childhood the need to use water at as low a temperature as in the case of adults. At the Children's hospital of Philadelphia it is the custom to employ the graduated bath, placing the child in the tub with the water at the temperature of 95 degrees and cooling it down to 85 degrees, or occasionally, with older children, to less than this. In nearly all cases this is quite as effectual as the cool bath, and much less likely to cause excitement from fright. Very frequently, indeed, sponging answers every purpose. Even a tepid bath may sometimes suffice. It must be remembered that many children bear elevated body-temperature remarkably well, and that the disease in childhood is likely to run a short course. We can therefore afford to let the fever alone. If it is true of adults, it is still truer of children that hydrotherapy is not to be used as an unalterable plan of treatment, no matter what its effect, and merely because the temperature has reached a certain figure. If it is used according to any such method, it is capable, particularly in children, of doing often far more harm than good. J. P. B.

OPIUM IN DIARRHOEAS IN YOUNG CHILDREN. (Medical Record, Dec. 17, 1898.

A Contraindicatious. 1. In the first stage of acute diarrhœa, before the intestinal canal has been freed from decomposing matter; 2, when the passages are infrequent and of bad odor; 3, when there is a high temperature or cerebral symptoms are present; 4, when its use is followed by elevation of temperature or the passage become more offensive.

B. Indicatious. I. When the passages are frequent, with pain; 2, when the passages are large and watery; 3, in dysenteric diarrhœa, together with castor oil or a saline; 4, in late stages, with small, frequent, nagging passages; 5, when the passages consist largely of undigested food, and the bowels act as soon as food is taken into the stomach.—Crandell.

H. B. S.

PHYSIOLOGIC PRINCIPLES UNDERLYING INFANT DIETARY.

In a paper under the above title, Dr. R. O. Beard, Jour. Am. Med. Assn., Dec. 17, 1898, well expresses some pertinent facts on the, always important and interesting, subject of infant feeding. He lays down, as fundamental, three primary factors as entering into the consideration of the scientific substitution of artificial food for human milk, viz., A, quality; B, quantity, and C, intervals between feedings.

1. In harmony with the best thought of the present time, he strongly urges cow's milk, properly modified and prepared, as the best substitute food, and looks for brilliant results in the future from the maintenance, in all populous centers, of well-conducted milk laboratories. He enters this vigorous protest against the use of commercial food products for infants: Food analysis has reached a point of accuracy which justifies the demand that food selection and food preparation for infant uses shall be essentially scientific. The market, full of manufactured infant foods, exploited in the secular and medical press as

perfect substitutes for human milk, and employed, on hearsay, one after another, in the feeding of the mal-nourished babe, without so much as a personal inquiry on the part of the prescriber into their nutritive qualities—is a scandal to the medical profession.

2. Although he appreciates the importance of regulating the quantity of individual meal to the average varying gastric capacity, yet he does not lay much stress, as an etiological factor in the production of stomach dilation, on the constant ingestion of abnormal quantities. He rather ascribes this so common condition in bottle-fed infants to the loss of muscular tone induced by disordered chemic conditions in the stomach, due to indigestion and retention of food. The following table of appropriate amounts at different ages he gives as sufficiently accurate for guidance:

One week, 70 c. c. (2 1-3 oz.).
One month, 95 c. c. (3 oz.).
Two months, 140 c. c. (4½ oz.).
Three months, 170 c. c. (5½ oz.).
Five months, 215 c. c. (7 oz.).
Seven months, 265 c. c. (9 oz.).
Nine months, 300 c. c. (10 oz.).

Time—he considers as of fundamental importance the intervals between the feedings. Error has arisen out of the misconception that the term of digestion is to be measured by the length of time the food remains in the stomach, whereas it should include the whole process up to the end of absorption from the intestine. He holds that it is of extreme importance that the physiologic rule of alternating periods of activity and repose in the digestive tract should be respected. In infancy, ordinarily, meal follows meal, with so great rapidity that functional rest is altogether abolished and indigestion and malnutritim closely follow. As a clinical proof of the soundness of his physiological deduction, he calls attention to a series of nearly four hundred infants fed upon either human milk or carefully selected and modified artificial food, allotted to them in quantities corresponding to the physiologic standard, and fed to them from three to five times in the twenty-four hours in which he has witnessed an attainment of weight and height far in excess of the average, a disappearance of serious gastro-intestinal disease, and a mortality of only .75 per cent. H. B. S.

We are very much gratified by the appreciative remarks made by other journals and by private correspondents, but nothing has been more highly prized than the generous and neighborly welcome which the Medical Dial has received from our old and esteemed friend, the Northwestern Lancet.

"You men must really be careful and not run over people," said the president of the surface car line to his motor men. They listened in respectful attention, and he contiued, "every person you kill is one less pasenger to ride."—Judge.

OBSTETRICS.

A. B. CATES, A. M., M. D. R. E. CUTTS, B. S., M. D.

THE PREVENTION OF PUERPERAL INFECTION IN PRIVATE PRACTICE.

Dr. G. E. Shoemaker (Therapeutic Gazette, Dec., 1898,) lays stress upon attention to details in the prevention of puerperal infection. He advises the use of a scrubbing brush which has been boiled, a new one for each case. They may be had for five cents each. Hot water and plain soap with the brush for ten minutes will prepare the hands and fingers so that the bichloride solution will have a tenfold cleansing power.

The napkins wrapped in a bundle and covered with a newspaper, should be baked in the kitchen oven one hour, at such a temperature as will just char the outside wrappings. Great stress is laid upon the wearing of a white duck suit drawn on over the ordinary clothing, or, taking the place of it. Such a suit does not cost over three dollars, is free from stains and germs and has a good moral effect.

THE TOPICAL USE OF ALCOHOL IN PUERPERAL INFECTION.

Dr. Geo. H. Noble (Georgia Journal of Med. and Surg., Oct., 1898.) advocates the local use of alcohol in cases where the infecting bacteria can be reached within the uterus. The treatment may be used in conection with surgical measures, the injection of serum and appropriate general medical help.

Cases far advanced in which you have ceased to get absorption from the uterine cavity would not be suitable for the trial of this plan. Mixed infection is benefited just as much as those cases in which a pure culture can be shown.

After thorough cleansing of the uterine cavity including curetting, if debris be still present, a sterile rubber catheter is introduced into the uterus. Over the tip of the catheter is spread a strip of sterile gauze about an inch wide and two yards long. After the introduction of the catheter and its covering the gauze is pushed up by some other instrument and packed lightly. The object is to have it act as a retainer and not as a drain or tampon. A few drachms of 95 per cent of alcohol are injected through the catheter about every half hour until marked improvement has taken place. The projecting end of the catheter is kept thoroughly covered by an antiseptic gauze. The packing may be retained for several days if the case be improving; if not it may be changed. Any intelligent nurse can conduct the treatment after the dressings are in place.

Alcohol, being antiseptic and innocuous, is to be preferred to less frequent cleansing by

douches of stronger and more irritating materials. There may be some general stimulation and support by absorption.

HYDROGEN PEROXIDE IN THE TREATMENT OF PUERPERAL SEPSIS.

Dr. John N. Upshur (Richmond Jour. of Practice, November, 1898,) comes forward as another advocate of the use of hydrogen peroxide in the uterine cavity where cleansing is imperative because of continued septic absorption.

The method used by the writer consists of irrigation of the interior of the uterus with a sterile normal salt solution followed by curetting, if necessary and a repetition of the salt solution. Dry with aseptic cotton or gauze and apply the hydrogen peroxide either by an applicator or intra-uterine syringe. This should be repeated until the cessation of foaming shows that thorough cleansing has been effected. This procedure is practised daily until the temperature falls and remains at the normal point. This the writer claims always occurs within a week.

The advantage of this agent over the strong antiseptics is that it is non-corrosive and non-destructive of healthy tissue. The hydrogen peroxide causes a rapid oxidation of effete organic matter and completes in a short time what nature would accomplish, if at all, only with dangerous tardiness.

SERUM TREATMENT IN STREPTOCOCCIC PUERPERAL INFECTION.

Dr. E. W. Saunders of St. Louis reports his experience in the treatment of puerperal infections, in the January number of the American Journal of Obstetrics. The importance of the use of antistreptococcic serum is pointed out in those cases which have already gone so far that the micro-organisms have penetrated deeply into the tissues and cannot be reached by the local use of antiseptics.

The antistreptococcic serum stimulates the leucocytes, and, as a result, we have more active phagocytosis and increased alexin formation. The leucocytes are potent against streptococci and there is no clinical evidence that we get any effect on the bacteria.

The specific action of the serum manifests itself against the streptococcus pyogenes and the streptococcus erysipelatis, the identity of which has been firmly established. No claim is made of benefit in mixed infections, and stress is laid upon the importance of a fresh serum. No good results can be expected from a serum that is more than two or three weeks old. Undue delay in beginning its use militates greatly against success. Injections of ten cubic centimetres are advised to be given once or twice daily.

In the cases in which streptococci alone, or in great excess, were found in the lochia the results were very satisfactory. Improvement followed in less than twelve hours. The temperature fell from 104° to 100°. Mental depression disappeared, the appetite returned, the secretions were increased, suppuration was checked and the streptococci vanished from the lochia.

A. B. C.

Eye, Ear, Nose and Throat.

UNDER THE CHARGE OF
J. D. SIMPSON, M. D.

THROMBOSIS OF THE LATERAL SINUS DEPENDENT UPON SUPPURATIVE OTITIS MEDIA.

Dr. Edward B. Deuch in one of the most able articles written on this subject (the Laryngoscope, August, 1898,) refers to the fact that, up to a comparatively recent period, septic infection of the lateral sinus from a purulent inflammation of the midle ear was looked upon as a condition of the utmost gravity. These cases which did not prove fatal suffered for many months from general systemic infection, presenting the typical picture of pyaemia. The first step toward the relief of the condition was the radical operation upon the mastoid, proposed by Schwartze. This procedure, in a measure, prevented septic involvement of the intracranial blood channels. With the perfection of aseptic surgical technique it finally became possible to relieve a very large number of these cases, even after the sinus had been occluded by a septic thrombus. At the present time no case is considered hopeless, even although the thrombus may have extended from the sinus downward into the internal jugular vein.

The symptoms of sinus thrombosis are so characteristic that they can hardly be overlooked, provided the patient is under observation for a few days. The most characteristic sign is a sudden elevation of temperature, the thermometer frequently registering 105 or 106°. Coincident with this febrile movement, the pulse becomes rapid and feeble, and there may be mild delirium. In the course of a few hours the temperature falls spontaneously to the normal standard, or it may even become sub-normal. Defervescence is accompanied by profuse perspiration and great prostration. These abrupt temperature changes may occur at frequent intervals, the patient becoming gradually weaker, and, unrelieved by surgical means, dies. No other complication of middle ear suppuration produces these symptoms, and it is always safe to infer that any considerable abrupt elevation of temperature, followed by spontaneous defervescence, is due to the formation of aseptic thrombus in one of the neighboring venous channels.

During the last three years, Dr. Deuch has operated upon nine cases of this character. In eight of these the patients recovered, while in one case death occurred as the result of an acute nephritis.

MULTIPLE PUNCTURE OF THE SCLEROTIC WITH THE GALVANO CAUTERY FOR DETACHMENT OF THE RETINA.

Dr. J. O. Stilson (The American Journal of Ophthalmology, May, 1898,) after having tried puncture of the sclerotic for some years noticed that the puncture, however carefully made, is liable to close before quite all of the fluid has been evacuated, and often fails to provide for the escape of the exudate formed after the puncture. In order to secure a gradual evacuation, kept up for a long time, he makes two punctures of the sclerotic with the galvano-cautery. The diagnosis as to the location and size of the detachment is to be made by examination in the upright image. The head is to be tilted to one side and then to the other until the most dependent portion is determined; this is the location for the first puncture. The second is made in or near the edge of the detachment, if it be large, or even well in it, usually not in the sound retina, when the detachment is small, and yet far enough away to get the beneficial effect of a vent. The further object of the two punctures is to avoid making the one so large and to facilitate gradual and prolonged filtration of the fluid out of the subretinal space. The openings are made with the galvano-cautery plunged in directly at right angles to the sclerotic, and not in such a way as to form a valve. The point, which is white or red, should be held a moment in place without turning off the current, and gradually withdrawn. This burns a round hole which will not close as rapidly as one made with a knife or otherwise. He has seen it remain open six or eight weeks, and in one case ten. The new exudate wil escape as fast as it is formed; usually the retina attaches at the periphery first, and lastly at the point of puncture. The reaction is never violent.

Dr. Stilson reports five cases treated in this manner with results as follows:

1st case $\frac{20}{80}$ V—three years after operation.

2d case $\frac{20}{100}$ V—two years after operation.

3d case $\frac{20}{90}$ V—one year after operation.

4th case V counts fingers at three feet—negative result.

5th case $\frac{20}{70}$ V—one year after operation.

Statistically inclined tourist (in Oklahoma) —"what is the death rate out here'

Alkali Ike.—"Same as it is everywhur else —one death for every inhabitant."

CLINICAL MICROSCOPY.

UNDER THE CHARGE OF

J. FRANK CORBETT, M. D., G. D. HEAD, M. D.

NOTES ON EXAMINATION FOR TUBERCLE BACILLI.

A single negative result in examining for tubercle bacilli may be of very doubtful value under certain conditions. For instance, suppose we should find under the microscope abundant leucocytes, a considerable number of micrococci tetrageni or strepticocci, but no tubercle bacilli, we would not be safe in concluding that the case was not tuberculosis, for in advanced phthisis an infection of the tetragenous of or the streptococcus frequently supplants a former tubercular infection.

Further, we know that the tubercle bacillii produce only cheesy degeneration, and before liquefaction and cavity formation take place some other germ capable of producing these changes must gain supremacy. Hence we frequently find in old tubercular lungs, not cheesy material resulting from action of tubercle bacilli, but a purulent, foul smelling fluid which may contain few or no bacilli. This material when coughed up might contain no bacilli. As an illustration, in an advanced case of phthisis from the City Hospital, were found cavities in the lung containing pus, which upon examination showed bacillus coli commune, but no tubercle bacilli. This case had other areas in which the bacilli could be demonstrated. On the other hand, in cases of miliary tuberculosis where no liquefaction has taken place, the bacilli are not apt to be expectorated.

When the number of bacilli in sputa is small, they may escape observation. To obviate this difficulty, a very ingenious method has been devised by Ribbert. This consists in simply adding a small quantity of a 2per cent solution of caustic soda to the sputum and boiling until the tenacious mucous is disintegrated. The resulting fluid is submited to sedimentation, either by means of a centrifugal machine of by allowing it to settle in a conical glass. The sediment is examined as usual. The same result it is claimed may be obtained by using a solution of borax and boracic acid in place of the caustic soda.

In selecting specimen, care must be taken not to bring any strong antiseptic in contact with the sputa else the albumen and mucous will be precipitated and a tenacious mass be found which cannot be spread on cover glasses. When sending specimens to the laboratory it is best not to add solutions of carbolic acid to the sputa at once, for the reason that putrefaction does not affect the tubercle bacilli and if present they are more easily found after decomposition has disintegrated the surrounding mucous. Whether tubercle bacilli actually multiply in dead sputum, we do not positively know, but the work of Nut-

tail indicates this as possible. Occasionally specimens of pus have been submitted which show no bacilli, but upon inoculation will produce characteristic lesions of tuberculosis. Either this must be due to the fact that the bacilli are scant or to the fact that spores, capable of being developed into bacilli, are present. We as yet have no satisfactory way of demonstrating these spores, if such there be, except by inoculation.

J. Frank Corbett.

Hospital Clinics.

ST. BARNABAS HOSPITAL.

Clinic by A. W. ABBOTT, M. D.

GONORRHEAL CYSTITIS

This patient is 28 years of age. She contracted gonorrhea one month ago. About 10 days ago she began to have pain in the uerthra, with smarting following, when she passed her urine, and she also noticed a greater frequency. This gradually increased until now she is compelled to urinate every hour or two, with great pain during and after. The amount passed each time is not more than a tablespoonful or two, and she is never, when awake, without the desire to pass the urine. The expulsive efforts of the bladder are greatly increased and this is what we term tenesmus. She complains of constant pain in the bladder region and has back ache with a weakness which makes it difficult for her to walk erect. She has a constant inclination to ease the back muscles by resting her arms on some support. The temperature is 100 and the pulse 90. The urine is alkaline, specific gravity 1020, and contains some albumen and a good deal of pus. Were we to make a cover smear of the pus from the urethra we would probably find the gonococcus. The patient being chloroformed, we will examine the interior of the bladder with Kely's cystoscope. First, we wash the vulva thoroughly, and then introduce a dilator followed by larger ones until the urethra will admit a cystoscope ½ in. in diameter. The urine is now drained off and the patient's hips are elevated on a thick roll, in order that the atmospheric pressure may distend the bladder when the cystoscope is left open by the withdrawal of the obturator. With the suction bulb we draw out the urine remaining in the bladder. The room being darkened, we illuminate the bladder with the electric headlight, and instead of the pink hue of the normal bladder with its well marked vessels we find a reddish, velvety mucosa so thickened that none of the vessels are to be distinctly seen. This redness and thickening is increased at the trigone, but is quite uniform over the rest of the bladder. It bleeds more rapidly when touched by the end of the tube than the normal bladder. Some flakes of pus are seen on the walls, but in greater amount at the base. As we withdraw the cystoscope we find the urethra very much redder than the bladder mucosa and streaked with pus. There are no ulcerated spots on the bladder or urethra. We can positively say that the case is one of general cystitis, that it is still acute, and that no great damage has been done thus far to the mucous membrane.

We will now pour into the bladder, through the cystoscope, a couple of fluid drams of a ten per cent solution of nitrate of silver, with which we swab the whole surface, and allow to remain one minute, and then neutralize with a solution of common salt. The bladder will be irrigated twice daily with a hot solution of boracic acid.

As long as the urine is alkaline the patient will receive 10 grains of benzoate of ammonium. If it becomes too acid, she will take 5 grains of potassium bitartrate every hour until it becomes neutral. She will have a diet largely of milk and be advised to drink freely of water, in order to dilute the urine.

DR. LEWIS A. SAYRE'S MAXIMS.

Self-reliance, study, work—these, it seems to me, are the lessons for the young surgeon to learn day in and day out. Always keeping the star of honor bright before his eyes. To be a good doctor he must be a good man. While it is true, I am convinced, that a conscientious physician—granted ability and opportunity—does more good in the world than a member of any other profession, yet it is equally true that his temptations are so strong and so constant that without conscience he will shipwreck.

When Dr. Sayre, while yet a student of medicine in New York, opened the knee joint of a patient suffering from an abscess, and reported his action to Dr. Green, his preceptor, he was told to go and butt his brains out against a stone wall, and fill his head with shavings, as he had done something contrary to the teachers on surgery, the justly distinguished Willard Parker included.

War not over:—The army officers are now charging—exploding and recharging.

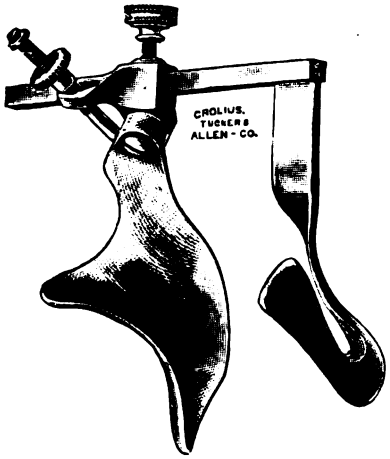
Male births increasing:—The statistics of the Health Department of New York show a marked increase in the relative number of male births; during the last two days of October and the month of November there were 2,055 male births and 1,806 female births reported, and in the first seventeen days of December, 1,259 male births and 1,138 female births in the Boroughs of Manhatten and the Bronx. This is a ratio of 53 boys to 47 girls, while the average ratio is 51 boys to 49 girls. Is this a sign of any coming war—and a preparation for it?

New Inventions.

NEW INSTRUMENTS.

A New Self-Retaining Vaginal Speculum. By A. W. Abbott, M. D., Minneapolis.

This speculum is self-retaining and is equally useful in all positions. It should be introduced closed, the large blade toward the posterior vaginal wall. The forefinger is then introduced between the blades and by making counter pressure by the thumb on the bar the requisite divergence is obtained and fixed by the nut on the retaining screw. The blades are then spread to the required degree by sliding the posterior blade on the bar.



No. 1.

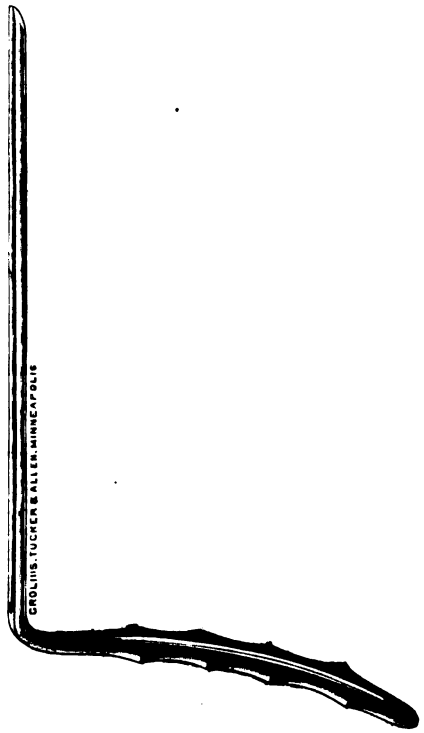
To remove the speculum simply reverse the process. With this instrument and without assistance, curettage, trachelorrhaphy, vesico- vaginal operations and uterine and vaginal dressings have been made.

This instrument was made for me by Crolius, Tucker & Allen Company of Minneapolis, Minn.

A. W. Abbott, M. D.

A NEW RECTAL SPECULUM.

This speculum affords a comprehensive view of the rectum and sigmoid part of the colon. Comparable to that obtained by Sims' Speculum in the vagina and it acts upon the same principle, i. e., by the pressure of the atmosphere. It is made in three sizes, the two smaller sizes may be used in children and are also useful in case of stricture of the bowels, for they can be passed through the stricture when not too small (as is rarely the case) so that the depth of the constriction can be made out. The speculum should be used with the patient in the Sims position with the hips elevated four or six inches or, if desired, it may be used with the patient in the knee-chest position. The best light is that from an electric head lamp or a strong light reflected by a head mirror. A short Sims speculum of any required width is introduced on the coccygeal side of the rectum to open the sphincter ani, while one of the long specula is placed on the pubic side. Instead of this arrangement two of the long specula may be correspondingly introduced. By the use of this instrument the bowel



No. 2.

can not only be fully inspected but room is obtained for the use of instruments in removing growths, treating intelligently ulcerations high in the bowel, dilating strictures, or for any other required operations. Anaesthesia with preliminary dilation of the shpincter ani will of course increase the efficiency of the instrument.

Crolius, Tucker and Allen Co., instrument dealers of Minneapolis are manufacturing these specula under the instructions of the inventor, A. W. Abbott, M. D., of Minneapolis.

DEFINITIONS.

A public school teacher, after exhausting herself in explaining some leading points in physiology to her class, received the following answers:

"The backbone is composed of many small bones with mucilage between them."

"The muscles are attached to the bones by tenderloins."

"The heart is the largest cavity in the body."

The world is improving:—A man has been fined in Cambridge, Massachusetts, for spitting in the cars.

Erratum: In the last issue the address of Dr. McIntyre was given as Madison, Wis., it should have been Hudson, Wis.

MISCELLANY.

MEDICAL WORTHIES.

I.

WILLIAM HARVEY.

By the Editor.

Three hundred years ago the illustrious discoverer of the circulation of the blood entered upon his brilliant career as a practitioner and investigator.

William Harvey, the eldest son of Thomas Harvey, a Kentish Yeoman, was born at Folkestone, April 1, 1578. He passed through the grammar school of Canterbury, and in his sixteenth year,became a pensioner of Caius College, Cambridge. At the age of nineteen he took the degree of B. A. and choosing medicine for his profession, entered the University of Padua under Fabricius and Casserius, whose names have been stamped upon the nomenclature of anatomy for all time. Fortunate was it for Science that Harvey received his training under these illustrious men, for their teaching had no doubt the effect of directing his mind and tastes toward the labors which were in after years crowned with such glorius results. He received his degree of Doctor of Medicine in April, 1602, and, returning to England, settled in London. Two years later he married the daughter of Dr. Lancelot Brown who had been physician to Queen Elizabeth. In June, 1607, he was duly admitted a fellow of the Royal College of Physicians, and that learned body, to this day, reveres his memory by meeting once a year to listen to the Harveian Oration which is delivered by one of its distinguished fellows. Of Harvey as a practitioner we know but little. By fortune and by training he was placed in the most advantageous position for acquiring a lucrative practice. He was appointed physician in ordinary to the king and numbered among his patients, the lord chancelor, Francis Bacon and the Earl of Arundel. In 1609 he received the appointment of physician to St. Bartholomew's Hospital. He was thrice Censor of the college and in 1615 received the high distinction of being appointed Lumleian lecturer. He began his lectures in 1616—the year of Shakespeare's death—and for the first time brought forward his views upon the movements of the heart and blood.

For nine successive years he elaborated his theme, adding new proofs and devising new demonstrations and not till 1628 did he venture to proclaim his discoveries to the world in his famous publication of the Eccercitatio Antatomica de Motu Cordis et Sanguinis.

This dissertation is a masterpiece of accurate observation, patient accumulation and arrangement of facts, ingenious experimentation. and logical deduction. No better model could be selected for a Scientific paper of today. The knowledge of the motions of the heart and blood before Harvey's discovery was very vague and unsatisfactory. Aristotle taught that the blood was elaborated from the food in the liver, thence carried to the heart and sent by it through the veins to all parts of the body. After him came Erasistratus and Herophilus of the Alexandrian School who advanced beyond Aristotle's ideas and thought that while veins carried blood from the heart to the members, the arteries carried a subtle kind of spirit.

Galen discovered that the arteries were not simply air pipes, as their name implies, but that they contained blood as well as vital air and spirit. Before Harvey's time it was known that the blood is not stagnant in the body. The movement of the blood was supposed to be slow and irregular in direction as well as in speed just like the circulation of air through the different rooms of a house. It was thought that one kind of blood flowed from the liver to the right ventricle of the heart, thence to the lungs and through the venous system to all parts of the body, another kind of blood flowed from the left ventricle to the lungs and general system by the arteries. The septum of the heart was believed to be pervous allowing the blood to pass directly from the right to the left side. The function of the heart as a motive power in propelling the blood was not dreamed of; it was supposed to pulsate on account of the spirit it contained and when it expanded it sucked the blood in during its active diastole.

The whole purpose of the movements of the heart was believed to be the mixture of blood and spirits. Sylvius and Fabriciaus discovered that the veins possessed valves and Servetus found that the septum between the right and left sides of the heart is complete. Judging from this anatomical fact and the large size of the pulmonary arteries he concluded that there was a communication in the lungs by which rthe blood passed from the pulmonary artery to the pulmonary vein thus describing the lesser circulation.

These two discoveries paved the way for Harvey's work, but the use of the valves was not un-

derstood and the existence of the lesser circulation had not been clearly demonstrated.

Harvey demonstrated beyond question the following facts.

1. "It is the contraction and not the dilation of the heart that corresponds with the pulse, and the ventricles by pure muscular action force the blood which they contain into the aorta and pulmonary artery.

2. The pulse is not produced by the arteries enlarging and so filling by sucking the blood into them, but by the arteries being filled with blood and so enlarging.

3. There are no openings or even pores in the system of the heart, so that the whole blood in the right ventricle is sent to the lungs and round by the pulmonary veins to the left ventricle, and the whole blood in the left ventricle is again sent into the arteries round by the smaller veins into the venae cavae and by them to the right ventricle again, thus making a complete circulation."

4. The blood in the arteries and that in the veins is the same blood.

5. The action of the right and left sides of the heart, auricles, ventricles, and valves, is the same, the mechanism in both being for reception and propulsion of liquid and not of air, since the blood on the right side, though mixed with air, is still blood.

6. The blood sent through the arteries to the tissues is not all used; most of it runs through into the veins.

7. There is no to and fro undulation in the veins, but a constant stream from the distant parts towards the heart.

8. The dynamical starting point of the blood is the heart and not the liver."

But the movement of the heart and blood did not by any means embrace the whole of Harvey's physiologyical work. After the publication of his treatise he turned his attention to the study of generation in Animals and for many years carried on his investigations, dissecting over and over again the generative organs in Mammalia serpents and birds. As far as dissection could throw light upon the subject he left nothing undone, but he was constantly handicapped for want of a microscope, the only instrument available in his time being a pocket lens which magnified four diameters. No wonder he failed to find the cell elements of the ovam or the motile filaments which constitute the "Vital Spark" of the spermatic fluid.

As a practitioner Harvey was not very popular. Aubery relates that he paid his visits on horseback with a footcloth, his man following on foot as the fashion then was. "Though all of his profession would allow him to be an excellent anatomist, I never heard any that admired his therapeutic way. I knew several practitioners that would not have given three pence for one of his bills (prescriptions) and that a man could hardly tell by his bill what he did aim at."

In his declining years he retired from practice and lived with one or the other of his brothers who were wealthy London merchants. His wife was dead and he was childless. The college of physicians received many gifts from him and not the least of these was his paternal estate in Kent which was valued at 56 pounds a year. From this annuity provision was made for the salary of a librarian and for the endowment of a yearly oration.

All honor to the memory of Harvey and may we all be animated with the spirit which posessed him when he directed in his deed of gift that the orator should exhort his fellows to searcch out and study the secrets of nature by way of experiment, and also for the honor of the profession to continue mutual love and affection among themselves."

AVOID LONG TITLES TO ARTICLES.

In the program of the meeting of a learned American Medical society, held A. D. 1898, the title of one paper was made up of forty or fifty words, and another required twenty or thirty words. For the sake of mere pity of librarians and catalogers, this sort of thing should not be encouraged or allowed. There are other and sufficient reasons, but that one alone should suffice. Those who indulge themselves in this manner should improve by turning their interminable descriptive headings into Latin—of which nine-tenths of their readers know little or nothing. A good title is short; its object is to classify and to catch the student's eye. The longer it is, the less likely to do so, thus defeating the author's first object. The classification must be general, and not replace the detail and description, which properly belong to the text.—Philadelphia Medical Journal.

INSOMNIA.

A Russian remedy is to have a dog sleep in the room, and preferably in the same bed. It may be from a sense of companionship, or one of security, or it may act suggestively; at any rate, it is said at times to prove of value when other means fail.—The Public Health Journal, New York, Dec., 1898.

A CHALLENGE TO CHRISTIAN SCIENCE.

Dr. Charles A. L. Reed, of Cincinnati, published in the New York Sun of January 1, a letter which has not yet been answered by the high priestess of Christian Science. Dr. Reed's letter was called forth by an alleged defense of Christian Science by Sister Eddy previously published in the Sun. After paying his respects to the lady, assuring her that he had studied her, her followers and their teachers, he proceeds as follows:

"Mrs. Eddy comes into the arena with her characteristic bravado and challenges the world to prove a negative. She blissfully closes her eyes to the fact that she has not proved the positive. On the contrary her self-heralded wonders rest entirely upon her own unsupported declaration, and that to me and to a great many other people is worth absolutely nothing. She should remember that even people who are not the victims of vagaries such as hers, and whose everyday utterances do not toy so confusingly with the eternal verities as do hers—even such people are expected to bear the burden of proof when they seek to tax credulity. I therefore demand the proof of this high priestess, and that the issue may be clearly drawn I shall take up a few of her declarations, seriatim:

"Mrs. Eddy says: 'I healed consumption in its last stages * * * the lungs being mostly consumed.'

"I denounce this declaration as false, and challenge its substantiation by competent and disinterested testimony.

"Mrs. Eddy says: 'I healed carious bones that could be dented with the finger.'

"I denounce this declaration as false, and challenge its substantiation by competent and disinterested testimony.

"Mrs. Eddy says: 'I have healed at one visit a cancer that had so eaten the flesh of the neck as to expose the jugular vein so that it stood out like a cord.'

"I denounce this declaration as false, and challenge its substantiation by competent and disinterested testimony.

"When Mrs. Eddy speaks of 'malignant tubercular diphtheria' as among her cures, she, by her own phraseology, proclaims her utter ignorance of one of the most dangerous of diseases, now nearly bereft of its horrors through the beneficence of modern medical science—a disease chiefly of defenseless childhood that she and here fanatical followers would sacrifice upon the altar of their tragic egoism.

"But if Mrs. Eddy has done all of these wonders she can do them again. If she is devoted to humanity in the altruistic fashion that she proclaims, she will not hesitate to demonstrate her alleged 'science' under circumstances that will give it the widest possible influence. To this end, if she will come to Cincinnati, I will place at her disposal cases of 'consumption,' cases of 'cancer,' and cases of 'carious bones.' She shall have them under observation for such time as she shall determine and she shall dictate all details of their management. They shall, however, be under the daily observation of a competent and disinterested person of my choice but who shall have no voice in their management and who shall visit them only in her presence. If she, by her Christian Science, shall cure any of them I shall proclaim her omnipotence from the housetops, and if she shall cure all or even half of them I shall cheerfully crawl on my hands and knees that I may but touch the hem of her —walking dress. If it will be more to the convenience of Mrs. Eddy and she is not disposed to honor us with a visit, I shall take pleasure in endeavoring, through my friends, to make a similar arrangement for her at Bellevue or some other New York hospital. If Mrs. Eddy will accept this challenge and cure one or more of the cases she will thereby demonstrate that she may be something more than either a conscienceless speculator on human credulity or an unfortunate victim of egoistic alienation."—Western Med. Review.

THE PASSING OF THE EXPECTORANT.

The effect of the study of pathology upon treatment is nowhere more evident than in our treatment of acute bronchitis now as compared with that of a few years ago. The knowledge that a variety of agents, mostly of bacterial origin, are its causative factors; that the cause is sometimes to be found in the stomach, or again in the kidney, and so on, leads us to look askance on our former treatment with nauseating mixtures, under the name of expectorants. A well known clinician and teacher recently said, "there are no expectorants," and in a measure this is true, if we think of the class to which ipecac, senega and squills belong. Indeed the major part of the value of the ammonia compounds is undoubtedly due to their local effect on the stomach.

Now we treat the cause and symptoms, formerly we attacked the cough as a distinct disease. At present an occasional calomel purge, soothing inhalations, codeine or its relatives with tonics, in the early period, and perhaps potassium iodid later on, constitute the general plan of treatment as pursued in the large cities to-day. Certainly these attacks do not seem to last quite as long as they did when we aggravated the condition by an additional gastritis due to the fermenting syrup and the irritating substances combined with it.—Charlotte Med. Journal.

Teacher.—"In what part of the Bible is it taught that a man should have only one wife?"

Little Boy.—"I expect it's the part that says no man can serve two masters."

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REPORT OF TREATMENT OF SECONDARY ANEMIAS, WITH CASES.

By J. A. STOUTENBURGH, M. D.,

Late Resident Physician, Columbia Hospital, Washington, D. C.

These anemias accompany or follow other abnormal conditions, and play an important part in their course. If not relieved, they prolong the original attack, and when convalescence is finally established, leave the patient a shining mark for those infectious diseases which claim for their victims those whose resistive power is below the normal standard.

In most anemias the blood is diminished in volume, the corpuscles in number and the hemaglobin sometimes falls to less than half the normal percentage. As a result the oxygen-carrying power of the blood is impaired, tissue metamorphosis retarded and nutrition of the whole body suffers in propotion to the degree of the anemia. There is loss of appetite and constipation, and the work of living is but lazily done.

Treatment.—First. Regulate the bowels; for this podophyllum in small daily doses is effective. Second: Cause patient to drink freely of good water, boiled preferred, taking a glassful hot three-quarters of an hour before each meal. This fills up the circulation and facilitates excretion of waste products. Third: Give appropriate treatment for the original disease, and Fourth: We need a remedy or combination of them that will increase the oxygen-carrying power of the blood, increase the appetite and stimulate the stomach and intestines to renewed activity.

Many so-called blood-makers attempt to do too much for us by supplying predigested and artificial food. It is better to give nature a chance, by coaxing her to resume her work, and then furnish a nutritious and easily digestible diet.

Gray's Glycerine Tonic Compound is a preparation meeting the fourth requirement, and it has done me excellent service in many cases besides those here reported. It is made by the formula of Dr. John P. Gray, a combination of sherry wine, phosphoric acid, gentian, taraxacum, glycerine and aromatics.

The following cases from my note-book will best illustrate my point:

Case I. Mary P——, aged 24, seen first June 11, 1897.

History.—Had several attacks of malaria during fall of 1896, intermittent and remittent types; suffered two severe attacks of bronchitis during February and March, and had malaria again in May. Has been sick now six days.

Examination shows a profound anemia, rapid and very small pulse, temperature varying from 99.6° to 103°, as shown by later observations. Diagnosis, remittent malarial fever and anemia.

Treatment began with calomel, followed by quinine in doses of 5 grains every hour for four hours each morning, and small doses of podophyllin at night, plenty of boiled water, and a liquid diet rich in nitrogenous elements. Fever continued one week, but being convinced that anemia was partially responsible for it, on third day ordered Gray's Glycerine Tonic Compound in half-ounce doses every four hours before taking food. This was continued four days with quinine as above, when temperature was normal. Now put on full diet, tonic continued before meals and quinine gr. ii. after meals. Treatment continued ten days when patient reported a gain of four pounds, great increase in strength and growing appetite; pulse strong, appearance much improved. Tonic continued ten days longer, when a fine color and strong pulse evinced perfect health.

Case. II. Margaret G——, aged 36, widow, first seen May 17, 1897. Took cold in March, had a constant cough, lost appetite and flesh, constipation and has sweats and fever. Has taken several preparations of cod-liver oil, iron, hypophosphites and various cough mixtures without material relief.

Examination.—Roughened bronchial respiratory murmur, small moist rales over left apex, some dryness and fine whistling rales over right; no dullness elicited; anemic murmur at base of heart; pulse soft, 100; expectoration scant, glairy.

Treatment. For bowels, same as Case I., boiled water to be drunk freely, and a mixture containing codeine one-sixth grain, and beachwood creosote m.i in ʒi of strong syrup of ginger, to be taken every four hours to relieve cough. Gray'sGlycerine Tonic Compound was begun at once, taken after meals on account of irritable stomach.

May 27. Cough slight, no expectoration or sweats, sleeps and eats well; auscultation-respiratory sounds much improved, a few moist rales over left apex, Codeine mixture given twice a day. Tonic continued.

June 7.—All symptoms have disappeared; examination negative; pulse strong, condition excellent, although she is supporting herself and children by hard work.

These are some of the cases in which I have used this new restorative with the best satisfaction. I am well satisfied that we have in this tonic a most valuable medium, one sure to grow in favor as its merits become better known.

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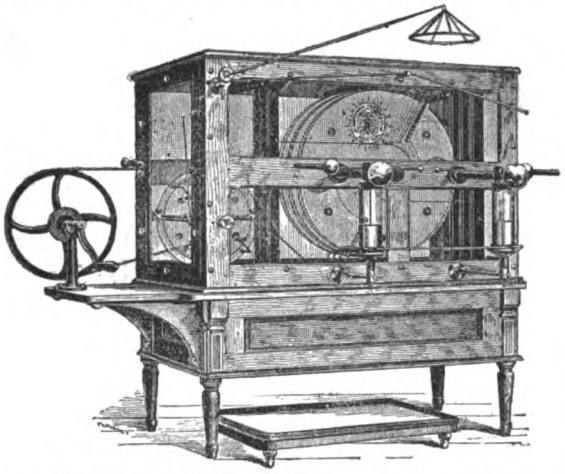

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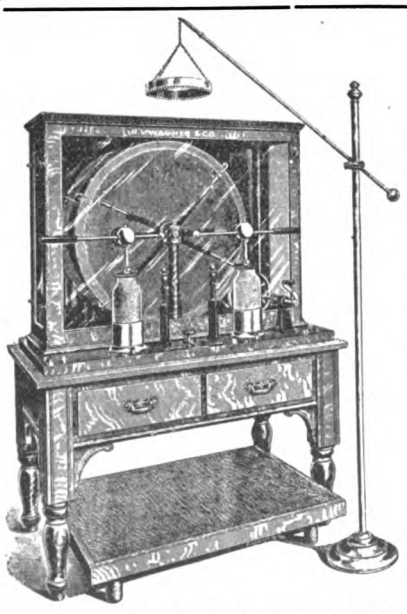

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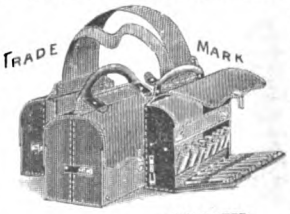

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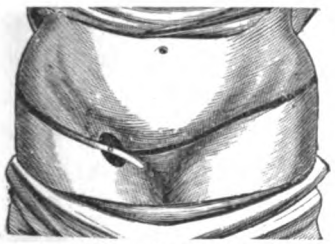

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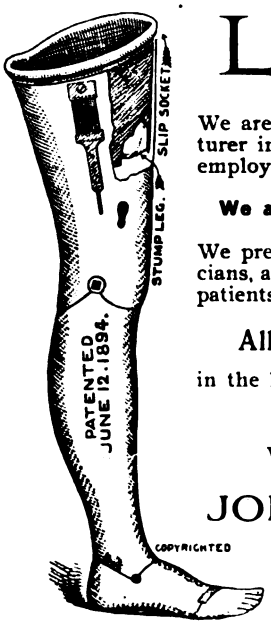

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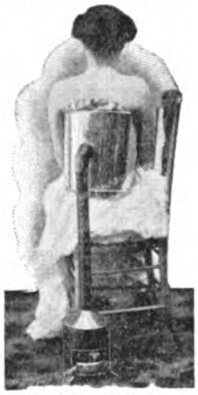

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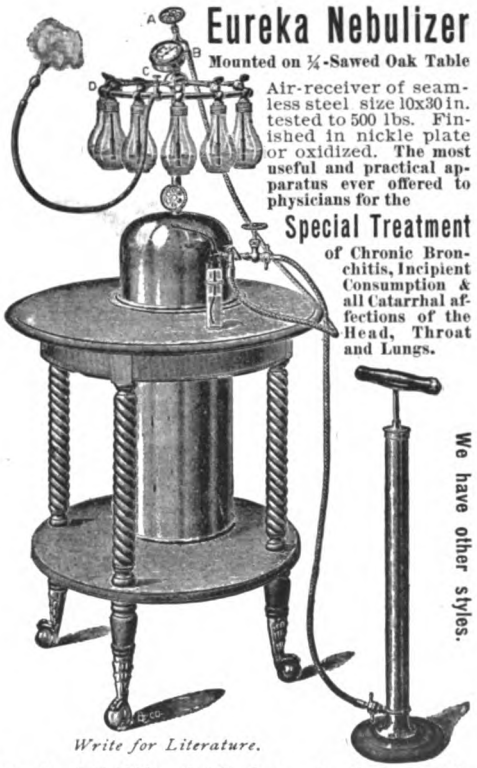

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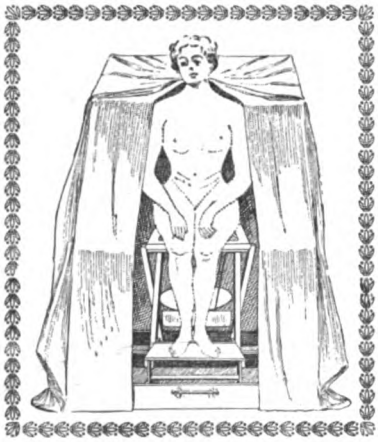

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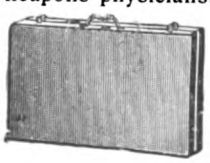

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Vol. I. MINNEAPOLIS, MARCH, 1899. No. 4.

Original Articles.

A CLINICAL LECTURE DELIVERED AT THE MINNEAPOLIS CITY HOSPITAL.

By J. H. DUNN, M. D.

Professor of Genito-Urinary Diseases and of Clinical Surgery in the University of Minnesota.

SKIN GRAFTING—DISLOCATION OF SHOULDER.

Gentlemen:—This case might very profitably serve as a text for a whole morning's study. The young man is now 23 years of age. When four years old he was severely burned upon the right hip and thigh. After 12 years we have this large surface, still unhealed. The ulcerating surface is at present more than two-thirds the original size and presents an area of 40 sq. inches. The failure to heal during this long period, is due to several causes. 1st, the great difficulty—almost impossibility of healing such large losses of skin without skin-grafting. 2nd, the foolishness of the patient and his parents in failing to allow a continued, proper management of the case. Such cases are a great trial to all concerned and require great patience and skill, perseveringly followed. The mother tells me that while the boy was small the father could not bear to have him hurt, and if the child refused to be dressed he would send the doctor away. This large scar over the opposite trochanter is the result of ulceration from the pressure of long lying uncared for, the bad doctor being kept at a distance by the fond parent. The young man has profited but little by his long and sad experience, for three weeks ago when this surface had been gotten into prime condition for skin-grafting, he ran away on the first mention of an operation, and tramped to Wisconsin to find refuge with an uncle. His relation had the good sense to send him back, and he re-entered a week ago with the ulcer in a filthy, sloughing condition. After a week's treatment with hot antiseptic fomentatives, we have succeeded in getting it fairly clean, but still far from the satisfactory condition which existed before this foolish escapade. 3rd, we learn that the surface has been several times nearly healed—reduced once or twice to the size of a silver dollar, but before the healing was complete, the thin, ill-nourished scar tissue would break down or ulcerate away. This is a very common occurrence in vast scars which have healed with such difficulty and chronicity. Before the discovery of skin-grafting and modern management of such vast losses of skin, it was next to impossible to heal them. Of coure the element of infection is always present until the whole surface is well healed. On the advent of any unfavorable conditions local or general, the feeble scar tissue melts away before the infection, and this wavering advance and retreat in the struggle between the enfeebled cells and the micro-organisms continues. Even should the connective tissue and epidermis completely win the fight and thinly heal the wide area over, there is danger that some slight injury or irritation would give other bacteria entrance to resume the struggle. Hence the importance of healing such large losses of skin as promptly as possible, and with a minimum of contracting connective tissue, a result best achieved by skin-grafting. If you will examine this ulcer carefully, you will find the edges bordered by a dense indolent scar tissue with poor circulation, while the ulcer presents an uneven, warty or papillary appearance in places, very suggestive of a vast ulcerating epithelioma. Indeed these years and decade-long ulcers do not rarely end in malignant degeneration, i.e., carcinoma. At this moment I can remember at least four such instances falling under my own observation. Probably the youth of the patient has thus far protected him from this well recognized tendency of the conditions here noted.

Now, I think I may say, that it is practically impossible to heal this ulcer so that it will be likely to remain healed, by any measure short of

operation. Though the principles underlying skin-grafting are few and simple, yet in practice a considerable variety and choice of technique may be employed. The grafting may be large or small, thick or thin; taken from the patient himself, donated by another or reclaimed from the amputated member of some other unfortunate; or the epidermis of animals may be employed. Sometimes choice, sometimes necessity decides these matters. Then again the grafts may be applied to the granulating surface, or the surface may be completely scraped, freshened and prepared for their reception. These matters are worthy of careful consideration and should be decided upon the merits of each case, because circumstances alter cases. We must confine our attention chiefly to this particular case. With this thick, uneven coat of warty granulation—many places higher than the normal surface—and callous, indolent, poorly vascularized edges, it is perfectly clear that the surface should be thoroughly scraped off to the healthy connective tissue below. This I rapidly do with a large curette, or even with a dull knife blade used as a scraper. I also cut out this callous border which is choking out all thevessels from the adjacent normal skin. The bleeding which is not great, is now checked by applying large compresses wrung out of hot normal salt solution, and left on while we cut the strips of skin.

The opposite thigh having been thoroughly cleansed with soap and water, shaved, washed with ether and bandaged with antiseptic gauze, we remove the dressings, re-wash with saline solutions, steadying the skin thus with the left hand this razor, ground flat on one side, is taken with the right, and by a rapid sawing movement, strips of skin from ¾ to 1¼ inches wide, and from 2 to 6 inches long, are rapidly stripped off. The blade should not go too deep, first, because thin graftings are quite as good and in general even more likely to take; but second, and more important, if the whole thickness is removed you are largely "robbing Peter to pay Paul," and a troublesome sore is left on the other leg, while if the skin is simply split, and the bleeding, but not wholly skinned surface be properly treated, no ulcer and its following cicatrix results. There is left a mark—a peculiar scar, if you please, but it is not the contracting, adherent structure without glands or hair, such as results from the loss of skin. I have gone a little deeper at some points than I would wish but at no place clear through the skin. If you keep these surfaces clean they will rapidly heal in a few days.

These strips have been deposited in a basin of warm normal salt solution, and now comes the most tedious part of the process, viz; to carefully spread them upon our prepared surface. On removing our compresses, we find the bleeding all checked, and proceed to carefully cover it with the strips of skin, being careful that they are accurately and clearly applied right side up. I find a large blunt needle, aided by a fine pinch forceps, as good instruments as any in adapting these pieces. With the forceps, a strip is laid on the surface, spread out as well as possible, but the thin edges persist in curling under; by a patient sliding back and forth, and hither and thither with the needle, while the nurse plays a very gentle stream of salt solution upon the piece, we soon succeed in spreading out and closely adapting the skin to the raw surface.

Having covered the whole surface thus, we next cover it with lattice work of thin strips or rubber tissue to hold the grafts in place and to prevent the absorbent dressings from sticking to or disturbing them, the inter-spaces allowing any oozing or discharge to escape into the sterile gauze, which we now apply in several thicknesses; over this a rubber bandage is applied, and to secure further protection and prevent movement, in this case it will be best to apply a light plaster cast.

The place from which we removed the skin, is now treated in the same general manner. These dressings will not be disturbed for two days, and then only the outer ones, i.e., down to the rubber protective; those strips are not changed for four or five days. You will also observe that the dressing is wholly sterile, no antiseptics being used.

(Note:—Nov. 19. We will first dress the case of skin grafting of last Saturday.)

These outer dressings have been changed every other day, but the strips of rubber protective have not been changed. There is but very little suppuration and nearly all the grafts have taken well so that the large surface is nearly covered; only at a few points between the strips of transplanted skin a granulating surface may be seen, and this ulcer bids fair to be quite healed in two or three weeks. The place on the opposite calf from which the strips were cut, has practically healed without infection and hence without pain. The place upon the thigh from which

the rest were removed, has not healed quite so kindly. Here the razor went a little too deep at one point, and the wound has got slightly infected, hence it has been a little painful, and there is some secretion of pus.

After the class left last week, we placed the few remaining pieces of skin left over, upon the leg-ulcer of this man. The ulcer was about 1 in. by 2½ inches. It was healing and healing quite rapidly from the edges at the time, hence the strips of skin were placed upon the granulation without scraping. They have, as you observe, grown well and practically healed the ulcer.

Some of the class present at my operations at St. Mary's Hospital last week, will remember the extensive burns which I grafted with skin taken from the leg amputated at the hip joint. That was the case of a woman who was extensively burned 10 months ago. When she came under my notice two months ago, all the skin on the left thigh from the knee to the hip joint, excepting only a narrower strip 1 inch wide, was destroyed. The skin of the right thigh was about half as extensively destroyed. Her general condition was bad, from months of confinement, suppuration and pain. She had a hectic fever, poor appetite and was depressed. In short, her condition was such that it did not seem best to give an anaesthetic or cut strips of skin from her already much skinned surface. I therefore, kept the vast ulcers in as good a condition as possible and waited an opportunity of getting skin elsewhere. Last Monday, having to amputate a limb at the hip, skin in abundance presented, and we covered the granulating surfaces, which were not in very good condition, with strips shaved from the amputated member. The result has been most striking. Amid so much infection, of course many of the grafts have been destroyed, but vast areas have taken. The right leg will, I think, be almost healed in a couple of weeks. The other leg will be more than half clothed with skin, and the despairing woman has improved in mind, in appetite, and in every way, almost magically, in a week.

I mention this case to illustrate some of the varieties of technique in this procedure.

Skin-grafting is surely one of the great discoveries of modern surgery. A great convenience and recourse in smaller losses of skin, it rises to a life saving remedy in such cases as the one just mentioned, where healing is impossible without its aid. The principle was discovered and aplied by Reverdin in 1869, and since then the technique has been amplified and perfected by many surgeons, especially Thiersch. As carried out in our first case, the method is known as Thiersch's. In the Reverdin method little bits of skin lifted with the needle were nipped out with scissors, or better, with a razor, and applied to the granulations at intervals. The method of the last case mentioned might be termed "mixed." As I have stated, while the Thiersch method is the ideal one, in practice we find it necessary or convenient to resort to various methods according to the conditions and exigencies of the case in hand.

CASE II.

Here is a young man of 20 who was thrown from a horse five weeks ago, and has pain and loss of function in his left arm and shoulder ever since.

As you observe his shoulders, it is at once apparent that the point of the left one is flattened. The left elbow is on a lower plane than the right and stands out from the body. He is unable to elevate the arm to a level with the shoulder. I think you will be able to make a diagnosis from inspection alone. Your reply—"dislocation of the shoulder," is evidently quite right, but it may be best to confirm appearances by a little palpation. We are able to thrust the fingers almost under the acromion and coracoid processes, indicating an absence of the head from its normal position. Thrusting them deeply into the axilla and rotating the arm, the head of the humerus may be distinctly felt, dislocated downwards and forwards. We have then a dislocation, of over a months standing.

We will give the boy an anaesthetic and see if we can put it in. I have rarely found much difficulty in reducing a recent dislocation of the shoulder. Indeed, I can remember several instances, in which, after an anaesthetic was given, gently raising the arm sufficed to reduce the luxation—in two or three instances, quite unintentionally. Under complete anaesthesia, proper manipulation practically always succeeds without force. However, old dislocations are quite another story. The capsule closes about the bone, adhesions form, and ultimately, changes in the articular surfaces take place, so that replacement becomes difficult, if not impossible. As a general rule it is advisable to attempt reduction up to a year or two, after which changes in the socket render most cases of questionable utility, even if successful. I succeeded in reducing a

six months old dislocation in a woman of 70 years last spring. In her case, I promised to make an attempt, with the proviso that I should not use too much or too prolonged force in so old a subject, and hence might not unlikely fail. Fortunately only a moderate amount of force was necessary to break up the firm adhesions and replace the bone, with a decided relief of pain and increase of function in the member. I mention this, as I think some physicians incline to over-estimate the difficulties and advise against attempts at reduction in elderly persons, when the reduction might be made with benefit to the patient.

Having etherized this patient, we shall loosen up the adhesions by rotating the humerus. Now elevating the arm forcibly while an assistant pushes the head upwards in the axilla, we bring the elbow quickly to the side thus, and the contour of the shoulder is at once restored. We have succeeded much more readily than I should have dared to hope. We will bandage the arm to the side and not allow the elbow to be raised far from the side for two or three weeks until the capsule is well healed. Failure to sufficiently immobilize the joint may be a cause of those cases occasionally observed, in which luxation occurs every time the arm is carried above the head. I have a coachman whose shoulder I have to set three or four times a year, as it nearly always slips out when he unguardedly raises the arm into a certain position. Some years ago I had a patient whose shoulder I have reduced twice in one week, though by great care he was usually able to avoid luxation for two or three months at a time. He told me that for ten years it had been slipping out every little while whenever he chanced to get his arm too high.

Our time is up, but I shall continue the dressings in the next room and any of you having the time, may come in and observe several instructive cases. Operations are but a small part of surgery after all. Operative technique is of course important, and necessarily the most presentable to the student, but if he learns nothing more, he will not have learned much—only the apex of the great pyramid of surgical knowledge, while it is the broad and heavy base that is most needed and most difficult to construct.

When the late Henry W. Longfellow was once introduced to a person by the name of Longworth, he wittily remarked that "Worth makes the man, the want of it the fellow."

A CLINICAL LECTURE DELIVERED AT ST. BARNABAS HOSPITAL.

By A. W. ABBOTT, M. D.

Clinical Professor of Diseases of Women, in the University of Minnesota.

SINUS FROM INFECTED LIGATURE.

This patient is 28 years old. Had one child 7 years ago. Three years ago, had a laparotomy, for some inflammatory condition in the left pelvis. Following the operation, she states that she had a fever, and that her pulse ranged from 140 to 160 for three weeks. The abdominal wound became infected, and suppurated freely. The upper part closed slowly, but the lower end never healed. From this has resulted this fistulous opening.

These abdominal fistulae are the result of nature's effort to keep up an avenue of escape for discharges which would be fatal, were they retained. They generally traverse some portion of the peritoneal cavity. The walls of the portion passing through or into the peritoneum consist, at first, of adhesive lymph, becoming poorly organized, and finally developing into fibrous tubes of low vitality. Externally, they remain open, if the discharges are profuse or constant. Under other conditions, they may close temporarily, but frequently reopen, and are a source of great annoyance to the patient.

Their inner extremities may communicate with,

1st. The cavity of some organ, the bowel, bladder, Fallopian tube, gall bladder, kidney or ureter.

2nd. The cavity of a suppurating dermoid or other tumor, or extrauterine foetation.

3rd. An abscess resulting from and adjacent to a deep-seated carcinoma.

4th. A tubular abscess, and,

5th. A foreign substance which lies in a septic cavity; for example, kidney, gall or pancreatic calculi; enteroliths which have ulcerated through the bowel; gauze, sponge, or instruments which have been carlessly left in the abdomen, non-absorbable ligatures, etc.

The history of the case, palpation of organs, position of the fistula, character of the discharge, and careful use of the probe, will generally afford a very complete idea of the origin, anatomical relations and pathology of these fistulous tracts,

and will also indicate the proper line of treatment.

If pure bile, is discharged, we know the source is the gall bladder, or a gall duct; if urine, that the fistula communicates with the kidney, ureter or bladder, and its position will determine which; if thin, yellow fecal matter, irritating to the skin, that the fistula is in communication with the small intestine above the lower third of the ileum; if distinctly fecal, and partly solid, that the bowel lower down is involved; if tubercle bacilli are found in the discharge, that a tubercular cavity is at the bottom of the sinus, and so on. The cystoscope and rectal speculum may be important aids to diagnosis, for rarely a fistula may unite the cavities of the bowel and bladder, or the bladder and pelvic abscess, and not have an external opening, or some of these hidden fistulae may complicate an ordinary external sinus.

In this case, the history indicates that something was removed from the left pelvis; that sepsis followed, that at no time was there any fecal odor or appearance to the discharge. No urine has exuded. The temperature has been generally only slightly above normal, except when preceded by pain and followed by an increased discharge of pus (not tubercular).

A bimanual examination shows that the uterus is in fairly good position, but that it is fixed, and that there is a decided thickening on each side of it. This probe passes to the right side, when introduced into the external opening, and I can pass it deep down in the pelvis. I also find another sinus leading down in front and to the right of the bladder. I do not find a passage down into the left pelvis, which was the seat of the original operation. This need not deter us from expecting to find the source of the trouble on the left side, as we know that these sinuses are often tortuous and have a course very wide of a straight line. From all these facts, we may be pretty sure that the cause of the fistula's remaining open, is that there is a piece of infected non-absorbable ligature where the ligation was made.

An incision will now be made to enlarge the opening. This we will do very carefully, to avoid injuring the bowel or bladder. It will now admit my finger freely, and I find quite a large pus cavity on the right and covering the uterus. At the bottom of this cavity is an opening, which will not admit my finger, but through which I can pass this bent probe, which passes behind the uterus, under bowel and adhesions, around to the left side of the pelvis.

I also find another cavity, more in the median line, and just over the bladder. These cavities are lined with a soft, semi-solid substance, filled with little yellow particles, and which, on scraping off, are accompanied with a free oozing. With this dull curette, we will scrape off all of this substance from the walls of both covities, and wash out all the debris.

Turning now to the left side, I find a small opening to a sinus, which, as shown by the probe extends directly down into the deep left pelvis. I dilate this opening cautiously, pass my finger to the bottom, and can distinctly feel the knot of a ligature. With a pair of forceps, I reach down and remove this strong silk ligature, which has two loops, and was evidently used to tie off the left broad ligament. As the peritoneal cavity was broken into by my finger, I wall off the sinus with iodoform gauze, and carry also two pieces of gauze down to the bottom of the other cavities. The ends are cut off at the margin of the wound. This is covered with sterile gauze and cotton, and the patient bandaged. The gauze drains will be removed and the cavities repacked in three days. Thecavities will probably fill up and the wound heal in ten or twelve days.

We were fortunate in finding the ligature so readily. It may often happen that a much more extensive dissection is needed, with careful separation of adhesions, loosening adherent bowel and omentum with especial provision against soiling the peritoneum.

Abscesses from these infected ligatures, at times, though rarely, open into the bowel, and even less commonly, into the bladder. In such cases the closure of these visceral openings is very difficult. Sometimes these sinuses are so numerous, the pelvic organs so matted together and surrounded by pus pockets, that a vaginal hysterectomy is imperative, in order to afford complete drainage.

The following case is an illustration of complicated fistula. Mrs. B., age 38, no children, married 15 years. About 6 years ago had ovaries and tubes removed through an abdominal incision, on account of suppurative inflammation, by a very skillful surgeon. About a year after, he removed the uterus by the vaginia. Some six months after the hysterectomy an abscess formed in the pelvis which discharged in the lower part of the abdominal incession. Soon after a large amount of fecal matter began to pass through the vagina and, later, fecal matter occasionally passed by the abdominal fistula. About a year

after this the patient was in a desperate condition from partial obstruction of the bowels. I opened the abdomen again and found a sinus leading down to a foul smelling abscess which communicated with the ileum by a small opening. In the abscess were several small pieces of heavy silk knotted together. The upper end of the vagina, opened almost directly by another sinus into the sigmoid flexture of the colon. After removing the ligatures and cleaning out the abscess as well as possible, I separated the twisted adherent coils of small intestine which caused the obstruction, closed the openings into the ileum and sigmoid with fine cat gut, closed the abdominal opening and drained through the vagina.

The case did not do well at first. There was extensive suppuration and reopening of the sinuses. She was however relieved of the obstruction. The bowels acting naturally. The patient has gained about 20 pounds in weight. The abdominal sinus has lately closed and the vaginal fistula is so far healed that a very small amount of fecal matter comes that way and only at intervals of four or five days.

A case which I operated upon two or three days ago is also very instructive.

Miss D. 17 years old was operated upon in the northern part of the state a year ago for appendicitis which had gone on to extensive suppuration. After the operation an abscess formed deep in the loin which the surgeon opened through the original incision. The latter opening never healed and although discharging but a drop or two of thin pus daily could not be made to close by stimulating applications or packing.

Her pulse has been for the last two months from 100 to 120 and her temperature from 99 to 103° F. quite regularly high in the afternoon. She is emaciated and very pale. On opening the abdomen I found at the bottom of the sinus a piece of fine silk about 2 inches long, which I removed. On separating a portion of the bowel which had adhered to the line of the original incision I found that the peritoneum was covered with small, hard nodules varying in size from a mustard seed to a pea, some yellowish, but most of them grey and showing the characteristic appearance of tubercular peritonitis, since verified by the microscope. I enlarged the opening admitting the air freely to the peritoneum and then closed with silk worm gut leaving a very small slip of gauze for drain. This was removed on the second day; The union is apparently perfect as far as the sutures were placed; there is not a drop of pus, and I think it would have been as well, if not better, had I left no drain but closed the entire wound. She will be put upon a teaspoonful of whiskey before each meal and cod liver oil and peptonate of iron after meals with nourishing diet.

Before operating upon a fistula, where you suspect a ligature is the cause, it is well to see if you cannot fish it out with a small hook like that of a crochet needle. I have several times succeeded in this way.

Since cat gut or other absorbable ligatures have been used instead of silk these cases are very much less common than when silk was universally used. Sterile cat gut will never give rise to a fistula. You may also be perfectly sure that if you have used silk and have a fistula following you will never cure it without removing the silk.

CONSERVATISM IN MEDICINE AND ITS EFFECTS UPON THE PRACTICE OF TODAY.

By J. C. FARMER, M. D., MINNEAPOLIS.

The old orthodox conception of a doctor of medicine was much the same as the orthodox opinions of most every other occupation or profession which existed during the old puritanic period. That their conservatism colored all things (during the early history of our country) was but natural and consistent with the character and belief of the old colonial ancestors. The physician was a man of secretive methods, a rather mysterious and wonderful being, quite secluded from the public except in a strictly professional capacity; a very conventional and conservative man in keeping with the beliefs of the times.

Custom then demanded of the physicians that the compounding and administration of pill or potion was about the only legitimate function they might properly indulge in; that their sole duty towards the public consisted in the diagnosis of disease and the administration of the remedy. And, custom decreed that any further services toward the public, in any capacity,—not strictly immediate care of the sick,—was compromising the dignity of the profession. Etiquette was so strict as to forbid thought or action along any line not directly pertaining to the sick chamber.

To-day the standard of judging the physician's duties has greatly changed, but the effects

of the old customs and practices, to a considerable extent, still remain. The present laws and customs, forming the etiquette of to-day, still have clinging to them much of the narrowness of the past beliefs.

The standard in all things pertaining to the practice and science of medicine has greatly advanced, but like the ghost of the murdered father of the immortal Hamlet, tinctures of former bigotry come stalking back to remind us of the misguided and not forgotten past.

To-day the field of usefulness of the physician has been greatly enlarged and extended—his public services as well as private action are not the limited function of the early Puritan doctor.

The tendency of to-day is expansion, opening to the physician a broader field of public usefulness, and placing him in positions of public responsibility and trust never dreamed of by our colonial ancestors.

Yet there are many things in practice, it seems to the writer, that the physician has still to eliminate, and new and more favorable conditions to be created which will be of inestimable value in giving the profession a standard more in keeping with the important position which the practitioner holds to-day. The conditions do not exist, which, the writer believes are necessary, to give the physician the power for public good, which his education and social influence would naturally demand. These needs are of a very practical nature, and refer more to a business or social relation than to those of a purely professional or scientific character.

Practical, in the respect that they demand a more important recognition by the public through their legislative and executive departments. That they demand for the practice of medicine, better protection by the laws of the commonwealth. That they demand of the profession a more united and determined stand against fraud and chicanery as now practiced.

These needs are practical in the respect that they demand discrimination by the public between legitimate and illegitimate practice of medicine. They demand protection from the dishonest men and women who rely upon newspaper advertisement for a practice instead of a medical education.

Practical in that they demand better compensation for honest effort and worth among the legitimate practitioners.

The social phase of these necessary conditions appears in the respect of closer relationship among physicians themselves, and the demand which they make for wider acquaintance of doctors in business circles; better knowledge of legislation and executive methods, and the acquaintance and friendship with the officials of these offices, who have so frequently duties towards the practice of medicine to perform. The lack of these conditions which seem to the writer to be so vitally important to the successful practice of the profession, is but a natural step in the evolution of medical advancement, yet much can be accomplished towards recognition by candid effort to assist the natural plans for improvement.

One of the existing conditions which seems pre-eminently fundamental, in the writer's opinion, as causing many of the foregoing complaints, is that human attribute, selfishness. The past tendency of physicians, to be secretive and mysterious has its appearance in the physician of to-day as independence. It creates the tendency to egotism, and the tendency among practitioners of keeping aloof from one another. It has begotten uncongeneality and marks the profession to-day as one among the members of which little harmony of thought and action exists. This factor has caused much of the disfavor into which medicine has fallen of late years among some classes of laity. The feelings, the distrust, and the lack of good fellowship existing among many of the members of our profession goes far to cause much of the lack of confidence and distrust which characterize the public opinion toward medicine at the present time. That undue selfishness is greater in doctors than members of the bar or any other profession or occupation, is not true, nor have any of the foregoing remarks intended to convey this meaning, but, that great inharmony and disunion do exist, and the writer wishes to emphasize, in his opinion, this is the chief cause why these unfavorable conditions exist which have so marked an effect upon practice at the present day.

This incongruity and lack of harmony among doctors as a class, greatly deters united effort towards improvement in the practice of medicine, prevents combined action for better legislation, and enactment of laws governing the medical instruction and practice. It handicaps all effectual attempts to inhibit deception and dishonesty of the unscrupulous element of the profession.

This selfishness and professional jealously permits the most criminal carelessness and intentional frauds to be perpetrated upon the public under the disguise of, "doctor."

Men and women who have neither the right nor qualification to incur the responsibilities of a physician, engage openly in active operation as doctors of medicine, and the profession suffers the ignominy and disrepute of the results of such practice. The distrust with which so many of our calling regard their brother practitioners can not but affect the general public's opinion, to the great detriment of the profession. The tendency not to recognize all physicians who have thoroughly qualified and equipped themselves as brothers and equals (in the opinion of the writer) has been, and is today an unpardonable offense to the dignity and honor of medicine, and will ever be an obstacle, as well as a reproach to the profession of medicine.

Intolerance is the mill stone around the neck of the medical profession. The lack of public spirit and enterprise among physicians is another important fault of omission, which is directly a detriment and should not exist among a class of men and women whose education and training amply qualify them for thought and action along lines connected with the general welfare of the public.

Questions of public health, as well as affairs of city and state which call for logical thought, scientific methods, or reasoning, which every doctor has continually to put in practice, demand solution. The care of our city and county poor, the building of hospitals and asylums, the erection and completion of our own unfinished city hospital should claim the attention and earnest effort of every physician in the city.

The local medical publications of our city must rely upon every physician here for their success.

What, then, is the remedy, and the conduct apparent to every true disciple of Esculapius, that these needs may be supplied and our profession have the rank which the importance of its duties to humanity demand for it.

In the opinion of the writer not a few existing evils are, as stated, the results of lack of professional conduct; a lack of interest in the welfare and practice of medicine, and neglect in the zeal for its improvement. Let our interest, whether we are of the old school, new school, or what not, be one and the same, inseparable. We have a common sacred duty towards life and humanity which partakes of our Christ character a degree sufficient to eliminate all dogmas and creeds.

To see but one object in view, the quickest and safest route to health and happiness,

To maintain the dignity and honor of our profession.

To hold inviolable the professional relationships and trusts.

To extend to all members of the profession alike the right hand of good fellowship.

To recognize in our brother practitioners the right to differences of opinion and not lose sight of the fact that we are all human, therefore we all have that prerogative.

Our bigotry and intolerance do not consistently follow our claims to broad and scientific learning in our professional education, and therefore have no place in our minds.

Our conduct between one another must not be the loop hole through which distrust from without finds a foot-hold in the minds of the laity. Every physician must be as diligent in guarding his brother's name and reputation, as his own, from public calumny and dishonor.

It is by uniting in closer fellowship, and firmer bonds of union, and exerting greater zeal for the general welfare of medicine, that the conditions more favorable for progress and advancement can be made possible.

United effort must exist towards the discouragement of fraudulent practice and dishonesty in medicine, before it can be possible to eliminate it. It is by concerted action alone that we can create the proper opposition to advertising, quackery and the criminal ignorance and incapacity. These blotches of dishonor upon the professional character can not exist, if discountenanced by the profession, unanimously.

Thought and action along lines of public health and sanitary administration must always be in the province of the medical man, and the time must come when such affairs will be his rightful prerogative to administer. The time has arrived when our profession should stand behind the present effort to improve legislation in behalf of medical education and practice, and all physicians should be together in their attempt to bring to our state statutes measures which will comprise a much needed law for the welfare of medicine. The past has proven the insincerity of the physicians to accomplish the enactment of such needed laws, and now this present attempt should prove the fallacy of the general belief that

doctors can not stand together for their own good as well as that of the public.

Let us all, then, as devoted disciples of the art and science whose name we are all proud to do homage to, and whose best interest we are ever zealous to defend, give unanimous and hearty support to the measures herein presented, which are necessary for the vital and best interest of our honored profession.

Let our conduct towards the profession and every member in it, of whatever school, be of that sort of united fellowship which is akin to that sacred comradeship existing between the aged veterans, whose companionship through years of mutual dangers and suffering, has welded inseparably their life long union. And not unlike this devoted comradeship will the beloved and honored profession, through the aid of all powerful science and united army of Esculapian disciples, march on to greater triumphs over disease.

CASE OF CAESAREAN SECTION AND COMPLETE HYSTERECTOMY.

By F. A. DUNSMOOR, M. D.

Professor of Operative and Clinical Surgery in the University of Minnesota.

On the evening of Jan. 12th, I was called by a midwife to see a Mrs. F———, age 36, in labor at term, (she had two abortions, one three and one six years previous,) the midwife reporting "that the vagina was blocked by tumors that obstructed the process of labor." Upon examination, I found the entire lower segment of the uterus a carcinomatous mass, and so rigid as to prevent even the passing of one finger through the cervix, although the waters had escaped the night previous. The vaginal tissues were infiltrated, posteriorly to the rectum and anteriorly to the bladder. I sent the patient to Asbury Hospital, and on Friday A. M., Jan. 13th with the assistance of Drs. Dunn and Little, I made the Caesarian section, delivering a living male child in the shortest possible time. We decided, as the mother was hopelessly doomed if the parts were not wholly removed, to proceed to complete extirpation of the uterus and all the parts involved. In order to expedite matters, Dr. Dunn incised an outline in the vagina, going wide of all indurated parts; while, with Dr. Little's assistance, I proceeded to dissect out from above the entire uterus and both broad ligaments, with the exception of the peritoneal envelope. Every gland in the neighborhood showing the least enlargement was carefully removed.

The patient made an uninterrupted recovery and was sent to her home on Washington and Fifth Avenues, South, on the 21st day, the child in perfect health and the mother supplying abundant nutrition for it.

The case presents some points of interest, one being that with such extensive cancerous developments, there should have been no disturbance of the process of gestation; and second, the question which came up as to the best method of delivery of the child. The method advised by some , to incise the cervix and deliver by forceps, we believe, in this case, would have been impossible without such damage to the mother as must have resulted in either rupture of the bladder or such laceration of the adjacent parts, as would probably produce fatal results. Some German operators recommend such division of the cervix and then follow the delivery of the child by vaginal hysterectomy. In our case, it would have seemed impossible to have removed all the diseased tissue through this outlet. Indeed, Dr. Howard Kelly of Baltmore recommends the plan we adopted in all cases where the cervix is involved so as to obstruct labor.

THE INFLUENCE OF THE SOIL ON DENTAL CARIES.

C. Ross (Deutch Zeit. f. Chir. Bandx21v., Hefte 5 und 6, 1897) has examined the teeth of 20,000 recruits, and has noted the influence of drinking water on them. The harder the water, the richer the soil in lime and magnesia, the freer were the teeth from caries; and conversely, the softer the water, the poorer the soil in lime and magnesia, the more liable were the teeth to be invaded by caries.—Am. Year Book of Med. and Sug. 1899, p. 672.

INFLUENZA AND DRY FEET.

Recently a correspondent, who stated that he was "something of an authority on grip" sent a communication to the Times saying that the only sure way to avoid taking the disease was to keep the feet dry. In corroboration of the point he mentioned that since he had been careful to do this he had not had it, while before observing the precaution he had had it four years in succession, and got it "every time through his feet." Whereupon another correspondent comes out with the staggering statement that he knows a man "who has had grip five years in succession, and he has two wooden legs."—Boston Medical and Surgical Journal.

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THE CASE OF MARTIN vs. COURTNEY.

A decision of great importance to the medical profession was rendered January 12th, 1899, by Judge Mitchell of the Supreme Court of Minnesota. Dr. W. Courtney, of Brainerd, had been found guilty of malpractice and a verdict had been rendered against him in the District Court, Crow Wing County, and a motion for a new trial denied.

A patient, who had a suppurating focus in " the foot" after a severe contusion followed by surgical removal of injured parts, had been allowed to go about with the stump protected by a gauze dressing applied outside a collodion application. As the suppuration continued, and some redness of the parts gave evidence of inflammatory action about the suppurating focus, amputation was performed of an additional "quarter of an inch" of the foot. This was followed by sepsis and death.

The doctor was sued for malpractice, it being alleged that in the first place the stump was not properly protected when the doctor allowed the patient to walk about on it; and in the second place that the amputation was made in the inflamed territory and thus led to sepsis.

The Supreme Court does not enter upon the merits of the case from a medical standpoint; that is outside its province, the court and the jury having decided that part of the controversy. What the Supreme Court undertakes to do is to pass upon the question, whether the defendant had a proper trial; and it finds he had not. In the first place a Homeopathist was allowed to testify as to the treatment employed by an adherent of the rational school of scientific medicine, (so-called Allopathist or Regular.)

The Supreme Court finds that the inferior court erred in allowing the Homeopathist to appear as an expert to decide upon treatment by a practitioner of another school. To the lay mind nothing seems more rational than the view of the Supreme Court; for otherwise the so-called regulars would be liable to give expert opinions stigmatizing all treatement by homeopathists as negligent, and the homeopathists to declare the treatment of other schools faulty. It seems evident that the dispute between the various medical schools is not a legitimate object for adjudication by the legal courts. The objection, made in this case, that while homeopathists and regulars differed in medical treatment, they were guided by the same principles in surgical cases, and that the homeopathist therefore ought to be allowed to appear as an expert, falls to the ground when it is considered that the distinction between medicine and surgery is entirely artificial, that they naturally overlap each other, and that no single case of localized disease (the special province of surgery) is without its influence on the general status of the organism.

But the Supreme Court also decided that a new trial should have been granted by the inferior court because the verdict was not justified by the evidence. The main grounds for the decision seem to have been that the homeopathist had not seen the case; that he gave his opinion based only on the statements made by lay men; furthermore that he was a comparatively young man without any large experience. Upon the other hand the defendant and his associate had been in constant attendance and had from their own daily inspection a good idea of the condition of the injured foot; and there were three other disinterested medical experts who were men of more mature experience, one of whom had seen the case. All these experts in their opinions, acquitted the defendant of the

charge of malpractice. Here in this case was the evidence of those three or five men of mature experience stood against the one who was comparatively inexperienced, and who had not even seen the case.

The Supreme Court finds that the jury gave a verdict against the preponderating evidence of the experts, and that it was error to deny a new trial.

This part of the decision seems to be of great importance, and the more so to those who from personal experience know something about the inner history of most malpractice suits. Physicians are not apt to commit malpractice; they may, like other people, be careless, and "trust to luck" a little too much; but generally, when they treat a case, do what in their judgment is the best, for their personal interests are identical with those of the patient. The state (Minnesota) by giving them a license to practice after an examination conducted by its own agents stamped them, each one individually, as fit to practice medicine in all its branches, as far as knowledge and technical skill is concerned. Is there under such circumstances any reason for allowing a single man's testimony to outweigh the testimony of the main body of the local profession?

Malpractice suits are usually brought about by people who want to get some of a doctor's money, not because he has injured them in a pecuniary way, but because they think they can get the money under the form of law. Sometimes they are instigated by other doctors, who in this way try to besmirch the reputations of dangerous competitors. It is usually not difficult in any community to find some young man who is willing to appear as the champion of the common people against the trade interest of the professional labor union; it gives him a certain professional and social prestige. It is against this class of experts that Judge Mitchell's able opinion is directed. Well may he say that if a man can be found guilty of malpractice upon such evidence it would be unsafe to practice medicine or surgery.

We are glad that the old Pennsylvania doctrine that it takes thirteen men to steal a farm, is expanded in Minnesota; the process has to be approved by our Supreme Court.

"There are so many perils between the cradle and grave that it is a wonder that a man ever gets from one to the other," said an Irishman.

THE PASSING OF THE HORSE AS A SANITARY ADVANTAGE TO OUR CITIES.

The Commissioner of Police in London, Sir Edward Bradford, in commenting on the increase of motor carriages, as reported in Public Health, sees in that change a solution of the problem of congestion to street travel, and by the diminution of the number of horses a sanitary advantage of no small account. As motor carriages occupy only one half the space of wagons drawn by horses the great relief they would afford for the crowded streets of traffic is apparent; and the ease and promptness with which they can be controlled are advantages not to be overlooked or underrated, not to mention the accidents that may be escaped from runaway teams and excited animals.

But the sanitary advantages will not be all derived from the mere absence of the animals for traction; with electric or compressed air forces at command, we can have smooth clean streets, free from dust and foul odors, now, too much given up to filth and all kinds of litter scattered broadcast and in profusion. If in addition to the removal of the dumb animals the active "spitter" could be eliminated, still better conditions for health and comfort would be secured. It is not impossible that an ideal city might be realized—where the noise of wheels, the clattering of the iron shod feet of horses, the clanging of bells, the useless shouting of drivers and venders of merchandise, the abuse of overloaded and otherwise ill-treated animals are absent, and automobiles and bicycles are the means of locomotion for business or pleasure. Such a city might seem dead to a bustling, noise-loving person; but when thoroughly investigated and understood the quiet might be found not on account, necessarily, of lack of business, as the grandest forces of nature are silent in their processes and accomplish their results at their appointed times. A city of this character would afford an earthly paradise for the sick, the sleepless business man, the delicate, highly organized, intellectual worker, and the exhausted nervous woman.

The passing of the horse; yes let him leave the city; but his usefulness will not then end. In the country, with more freedom and harmless as to sanitary conditions in his surroundings, he will still command our respect for his beauty and strength, and for his intelligence and assistance in contributing to our work or our recreating pleasures.

Progress of Medicine.

MEDICINE.

UNDER THE CHARGE OF
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DIABETES MELLITUS.

Diabetes Mellitus in children and young adults as a rule pursues a rapidly fatal course. Any plan of treatment is unsatisfactory and futile in the majority of cases. But in elderly people the disease is less acute and more amenable to treatment. Even if a cure is impossible, it may be possible to modify the severity of the disease and prolong the life of the patient. This is accomplished more often by dieting than by medical remedies alone. In my experience the exclusive use of nitrogneous food for four or five weeks accompanied with small doses of alcohol, or sometimes without it, has given the best result. During this period all carbohydrates are carefully withheld, and under this treatment urinalysis shows that the sugar reaction disappears or is reduced to a trace. A tolerably robust patient can be encouraged to pursue this treatment, and will not suffer any ill effects from it. When the exclusively nitrogenous plan is abandoned, the patient is allowed to fall back gradually on a modified diet, containing as little starchy food as possible. In course of a few months if the specific gravity of the urine and percentage of sugar become extreme the patient again returns to a course of absolutely nitrogenous food. Should any complication arise requiring a surgical operation, it would be advisable to keep a diabetic patient on an exclusively meat diet for three or four weeks before any surgical operation is undertaken. In emphasizing the utility of the diet treatment I do not oppose the use of any medical remedies indicated, such as Carlsbad salts, mineral waters, pancreatic extracts, codein, etc. But in my opinion they hold a secondary place and should be administered symptomatically. T.

THE TREATMENT OF CONSUMPTION.

In discussing the treatment of consumption (phthisis) from the standpoint which aims to be fully in accord with the most advanced teaching, it is of the utmost importance to keep in mind at least two fundamental considerations; (1) An early diagnosis or a recognition of the signs that indicate the first deviation from the standard of health, and (2) the physical condition of the patient together with his environment.

An early appreciation of the patient's peril cannot be too strongly insisted upon, because the golden period for rendering effectual aid will most likely have been passed when the disease has so far progressed that he feels the manifest discomforts of its inroads, and when his friends take the alarm. Both the laity and the profession should be educated to more alertness in marking the signs of its insidious beginnings.

It is not sufficient to be satisfied to wait until the educated ear by skillful percussion is able to detect areas of thickening and consolidation to say nothing of small cavities or by means of the stethoscope to detect the catchy respiration or the mucous click. We must note the failing appetite, the imperfect digestion, the mal-assimilation, the slight hack or two in lying down at night, which is apt to ante-date the morning cough, the condition of the skin, the feel of the muscles and other tissues, the conformation of the chest or thorax, the catarrhal phenomena, the diminished elasticity and vigor and loss of energy; which things on being once noted are easily observed by the friends if not by the patient himself.

Signs such as are here mentioned, and these are not all, occrring in an individual with ominous family connections or associations or herdity are of enough significance to require that the patient put himself or be placed under the examination and observation of a physician who appreciates their import.

This regime is very different from that which now commonly prevails under which the patient does not seek the physician's advice until his cough has perhaps become an annoyance to himself or to his friends, or until he feels he can no longer discharge his accustomed duties.

Now briefly concerning the pathology of this initial stage: It is not the purpose here to consider at length the so-called "tubercular diathesis" or the "inherited tendencies" or the "ready soil," of the existence of which there is no lack of clinical evidence and from which the discovery of the bacilli has unfortunately somewhat diverted attention.

But it shall suffice to call attention to what has been appropriately called the "pretubercular stage" of consumption. "Tuberculosis is always produced by the bacilli, but all phthisis is not tubercular in all its stages." "Tuberculosis is an incident in the course of the disease and not the primary cause of pulmonary phthisis." "The tubercle bacilli may be found in the air passages of perfectly healthy individuals. It is not commonly found until after considerable organic change has taken place in the pulmonary structure. It (the bacillus) cannot then be rightly considered as the cause of phthisis" (McLean in Jour. Am. Med., February, '98.)

Jaccoud says: "Multiple and varied elements are the true cause of the disease. The microbe is only the incidental agent."

Barton says: "Back of the bacillus are causes which are operating to produce mal-nutrition and a lowered vitality."

Jacobus says: "The tubercle bacillus never attacks healthy tissues."

The following are a few sentences from Niemeyer written before the discovery of the tub. bacillus. They were written from the standpoint of the clinician and it is notable how they accord with the sentences above quoted.

"The greatest danger" says Niemeyer, "for the majority of consumptives is that they are apt to become tuberculous." "The majority of the cases of consumption are not the result of neoplasm (the bacilli?) but of inflammation, and when tuberculosis exists it is almost always preceeded by a pneumonic process which prepared the soil for the growth of tubercle."

In cropous pneumonia such result is rare. In chronic catarrhal it is almost the rule" He believed the "tubercle" to be a caseous metamorphosis of the pneumonic product."

In the light of the discovery of the tubercle bacillus the above author's pathology has been set aside as antiquated, but it will be observed how clinically correct it is in the judgement of good clinicians and pathologists of this day. The trouble has been that the discovery of the microbe has diverted the attention from most important phenomena connected with the clinical history of this disease. I say important because of their relation to the wise and successful management of the patient.

Unless the trend of the discussion of this subject, the acknowledged inability of drugs and the results of successful treatment by later and more rational methods are misleading, the correctness of the views here quoted will become generally acknowledged.

As to the use of drug medication in this disease little need be said here beyond the statement that by far the greater part of it is not only valueless, but that much of it is positively harmful; and further, that of the few drugs that continue in use, under which the patient seems to do well, it may be questioned whether the improvement is not in spite of them.

It has been no doubt truthfully said "when lodgment of bacilli is found in tissues no drug however administered can reach or destroy them. It can only counteract (in a measure) their toxins and increase resisting power of tissues against encroachments." The thing to be attacked is not so much the lesion in the lung directly as the lowered vitality of the body and the difficiencies of appetite, and drugs directed to a conquering of the bacillus in situ are not to be compared with measures which enable the organism itself to acquire strength to overcome the disease" (C. L. Minor,. N. Y. Med. Jour. 1-14-99.)

As to the real value belonging to serum medication, before it can be accurately determined we must have further data.

It may be authoritatively stated that advanced cases of tuberculosis of the lungs are almost in every instance irremediable under any circumstances.

That even in the incipient stages, the patient remaining in the same environment, regime and habits, there will be no improvement of consequence where reliance is placed solely in drug medication, and no permanent improvement even under good hygienic management.

But there is abundant evidence, and it is rapidly accumulating that consumption is curable under proper management. This subject will receive further consideration in next issue of the Dial. J. H. S.

THE STOMACH TUBE.

The closing years of the nineteenth century witness an increasing interest in the study, investigation and treatment of diseases of the stomach. Herschell in an able address before the British Medical Association (British Med. Journal, Oct. 29th, 1898,) reviews the subject of gastric therapy, emphasizing the efficiency especially of lavage, massage, and electricity.

As to the relative merits of lavage, massage and electricity, much difference of opinion exists in the minds of medical men. Gastric lavage in the form of the improved douche and spray is fast emerging from the just oblivion into which it was plunged by reckless and indiscriminate use. In the judgment of the writer, the stomach tube should never be used until after an accurate history of the case has been secured and a careful examination made.

The more important contra-indications are as follows:

1st. Advanced cardiac disease.
2nd. Aneurism of the larger arteries.
3rd. Advanced pulmonary tuberculosis or pulmonary disease of any form.
4th. Apoplexy and cerebral hyperemia.
5th. Advanced cachectic states.
6th. Recent hemorrhages of all kinds.
7th. Gastric ulcer with recent hematemesis.
8th. Advanced gastric carcinoma with vomiting of blood.
9th. Stomach or intestinal troubles with acute fever.
10th. Pregnancy, as a rule.

The more important indications for the use of the tube are briefly as follows.

1st. For diagnostic purposes.
2nd. Where the exit of the chyme from the stomach is hindered or retarded from either mechanical obstruction or muscular insufficiency.
3rd. For the removal of foreign or irritating collections interfering with digestion.

The above should not be considered inflexible rules, much depending on the individual judgment of the physician. J. W. B.

POSITION OF PATIENTS AFTER FEEDING.

After meals patients, if bedfast, or, if feeble, should be directed to lie on the right side, turned well to-wards the front, with the limbs extended and then to take deep and slow inspirations. This

to facilitate the flow of the food as rapidly as may be through the pylorus into the intestine where the digestion and absorption is for the most part to take place. The tension of the abdominal muscles and the forcible movements of the diaphragm bring about the prompt onward movement.

It is reasonable to expect that the proper order is that the process of digestion follow the intaking of food as promptly as possible, for this is the natural stimulus of all the agencies in the process and there should be no disappointment or halting by allowing the food to "puddle" in the stomach as it is liable to do if feeding is followed by a quiet decubitus without any aid to its escape from the pouch of the stomach except the action of its muscular fibres which in a weakened or dilated condition must be more or less ineffectual. In this way I have no doubt is brought about bad conditions of the stomach and a rise of temperature especially in Typhoids from a kind of auto-infection.

If any one doubts the force of this suggestion let him, after partaking of a full meal assume this position, breath as above and drop to sleep for not to exceed fifteen minutes, and then rise up to wonder where the "full feeling" has gone.

J. H. S.

DIPHTHERIA AND ANTITOXIN.

The adversaries of antitoxin have tried to make it responsible for diptheritic paralysis, with out any reason. It is true that there are many cases of paralysis occuring in children previously treated with antitoxin but it has always appeared to me that the number was swelled by some of those who would have succumbed without antitoxin long before the period of paralysis was due. Apparently mild cases of diphtheria are followed by paralysis; it is certainly true that many a case is changed into a mild one by antitoxin. It is after all better to have a paralytic child with the great probability of a final recovery than a corpse without even a chance of paralysis. Moreover, I cannot imagine a more difficult task than to calculate statistics on totally absent bases. The average number of paralyses varies according to the cases, the severity of the epidemics, and probably to the treatment also. And finally, large numbers of cases, like those of Baginsky, appear to prove the contrary of what has been alleged. Among 993 patients before serum therapy was introduced there were 68 cases of paralysis, or 6.8 per cent.; among 525 in the antitoxin period there were 27, or 5.14 per cent. Schmidt Rimpler feels certain that his patients with accommodation paralysis recovered more speedily under the use of antitoxin than without it.

Sudden deaths have occured after the injection of anti-toxin, the dose being in some instances quite small. The case of the Langernans child in Berlin, who died after having received an injection of antitoxin, is not explained in spite or because of loud vituperations and vilifications. Most reporters of cases have been satisfied with admitting they know of no explanation. Berlin publishes one of the latest cases, and admits that death cannot positively be attributed to the influence of the serum. Nifong (Medical Review, May 7th, 1898,) gave a boy of fifteen years, of slight build and with feeble circulation, fifteen hundred units. After ten minutes there were pallor, numbness of the extremities, cyanosis, swelling of the face, and vomiting. Death occured in thirty-five minutes. Two girls received the same dose of the same serum from the city chemist of St. Louis without a bad result.

Rauschenbusch observed on his four-year-old daughter, who had taken three times the dose while sick with diphtheria two years previously, pruritus, urticaria, vomiting, sopor, and heart failure after two hundred units injected for the purpose of immunization. It does not appear that a connection between heart failure and sudden death on the one hand and antitoxin on the other has been established in any case, and venturesome and generalizing speculations are not able to shed light on obscure subjects. At all events, a single finding, a suggestion, or a suspicion of vomiting and aspiration of a solid body into the air passages, or of the injection of air into a vein, or excitement and fright, or a lymphatic state, or a large thymus, if at all applicable to an individual case, does not permit of a universal interpretation.

After all, we can well agree with the conclusions of Dieudonne when he says that the treatment of diphtheria with serum is an essential advance in theapeutics, that its effect is more frequently favorable than that of former methods, and that accessory consequences do not outweigh the useful effects.

H. Biggs recapitulates many of his previous writings in a paper read before the Society of the Alumni of Bellevue Hospital, as follows: "Since the introduction of antitoxin treatment the mortality of diphtheria is reduced to one-half, its course is shorter and milder; an injection made within the first two days reduces the mortality to five per cent.; the earlier it is made the better the result. Small quantities of concentrated serum are tolerated by the very youngest babies. If antitoxin is not a specific it is certainly the best remedy in our possession against diphtheria. The genuine (that is, uncomplicated bacillary) cases are more amenable to its favorable influence than mixed infections. It has no secondary effects on heart, kidneys, or nerves. Heart failure and paralysis whenever observed are caused by diphtheria, not by antitoxin."—Twentieth Century Practice, Vol. XVI, P. 116.

Advice lately given to a class of newly made doctors:—"Take as greeting for your future, this four-square rule in your life of service—1, clean living; 2, just thinking; 3, hard work; and lastly, carefully weighed, straightly dealt,—when there is need of it,—English from the shoulder. —Clin. Rev.

SURGERY.

UNDER THE CHARGE OF
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KNUT HOEGH, M. D.

THE MURPHY BUTTON AT HEIDELBERG.

M. Jordan reports (Gaz. des Hop., Paris, 29th Oct., '98.) that in Czerny's clinic at Heidelberg, recourse was had to the Murphy button on every possible occasion. In recent years they had abandoned the button when dealing with the large intestine, but in other cases they had used the button on more than 100 cases without a single disaster. The button may be passed as early as the 7th or 8th day, but more often as late as the third week.

TREATMENT OF FRACTURES BY WEIGHT EXTENSION.

Bardenhauer (Centralbl. f. Chir. Leipzig—No. 46, '98) maintains that the weights employed for extensions in fracture are usually insufficient. He recommends 30 pounds for the femur, 15 to 20 for the leg and 15 for the maleoli. In the latter he rejects the stirrup and applies a plaster over the maleolar projections, claiming that this keeps the foot in better position. He lays great weight upon the necessity for carrying the plaster far above the fracture; for fractures below the knee, he applies them up to the middle of the thigh, and for fractures of the femur, they are to extend to the trochanters. He also applies additional strips encircling the limb at right angles to the usual longitudinal strips. The sooner after fracturing, the extension is applied, the better the results. In 1837 fractures treated during the five years past at the Cologne City Hospital, there was no case of non-union. He claims that by the proper use of extension the amount of calus is lessened, and passive movements of the joint are carried on more freely. Of 106 fractures of the maleoli, 75 per cent were able to return to work within 13 weeks. In 61 fractures of the leg, 60 per cent were fit for work within a like period.

CATHERIZATION OF THE URETERS.

Was leisted der Ureterkatheterismus der Nierenchurirgie?

Under this caption J. Israel, in the "Berliner Klin. Wochenschr, no. 2, 1899," contributes a long and interesting critique on the extreme claims of the diagnostic and therapeutic value of urethral catheterization as advocated by Caspar.

Very briefly summarized, he concludes:

First; catherization of the ureter alone can not answer the weighty question—what will be the degree of functional power in the remaining kidney after nephrectomy?

Second; The demonstration by this method, of disease in the second kidney, is not necessarily sufficient to contra indicate nephrectomy.

Third; The absence of abnormal composition in the sample of urine taken from the second kidney proves nothing for its soundness; gives no guarantee for its sufficient functional ability to withstand nephrectomy.

Fourth; Neither the health nor disease of a kidney in the anatomical sense may be demonstrated in every case with certainty by catherization of the ureters.

Fifth: The demonstration of the normal or of the abnormal composition of a specimen of urine drawn by ureteral catherization is not sufficient proof of the competent or incompetent functional power of the second kidney after nephrectomy.

Sixth; Sounding of the ureters gives no conclusive proof as to the presence or nature of the obstruction.

Seventh; In the specimen of urine drawn by catherization of the ureters, it is not clear whether blood corpuscles come from the kidney or from injury to the ureter.

Eighth; Neither catheterization of the ureters nor of the renal pelves, are free from the dangers of infection.

It has always seemed to the writer that it is safer for the practitioner to know less, than to know so much that is not so. I have always been inclined to believe that the extremists who would reduce renal surgery to an exact science by means of the urethral catheter, are on the whole, about as liable to fall down as the clinician who depends more on careful observation and his deductive reasoning, and less upon collecting and examining the two "urines." Of course in exceptional cases urethral catheterization is undoubtedly very useful, but it is far from being a certain road to infallible diagnosis, and one often more attractive as a feat of skill than beneficial to the patient. J. H D.

EXTERNAL URETHROTOMY.

Hayden, (Am. Jour. Med. Sciences, Feb., 1899.) contributes an article on external urethrotomy.

The author holds that such conditions as recurrence of the stricture, perineal abscess or fistula and uncured urethro-cystitis, are not uncommonly observed after this operation, and can in great measure be avoided by carefully following out certain details of technique in operation and after care, among which the following appear to be the chief: 1st, by dividing all the stricture, not only on the floor, but also on the roof of the canal. 2nd, by digital dilation of the posterior urethra to prevent post operative tenesmus, and giving the prostate and bladder a much needed rest. 3rd. A proper drainage of the bladder by a large soft rubber perineal tube accurately placed so as to perfectly drain the bladder, and secured by silk suture through the tube and both edges of

the wound, the latter being lightly packed around with gauze and the suture tied over it. The bladder is then irrigated and partly filled with warm boric acid solution, and the tube clamped, until the patient is put to bed when it is connected with the usual syphon apparatus. The receptacle is to be placed only slightly lower than the bladder, that undue suction on the tube may not irritate the bladder. In two to four days the tube is taken out, washed and replaced, and removed permanently on the 5th to the 7th day, after which the patient is allowed to be up and about, passing the urine by both wound and meatus, pressing a pad of gauze against the wound as he does so. In the majority of cases all the urine passes by the urethra in a week after removing the tube. 4th, proper post operative dilatation. When the tube is removed on the second to fourth day, a medium sized sound is passed to the bladder and held for a minute. This is repeated every second or third day until the perineal wound is cicatrized, and the urethra takes a 28 or 30 French sound, with ease. Then the interval may be made longer. The perineal wound should be inspected daily in a good light, and made to heal solidly from the bottom and not to bridge over in places. This may be prevented by running the finger through the wound from end to end. Lastly when the wound is properly healed, the patient must be made to understand that his stricture is not cured, but that he must continue to have sounds passed at long intervals for the remainder of his life. Also that he must not stop bladder or urethral medication until the urethra is normal, and the urine practically free from tissue elements.

THE AFTER TREATMENT OF GASTROSTOMY.

R. H. Lucy, (Edinb. Med. Jour., Jan., '99.) contributes a brief paper upon the after treatment of cases of gastrostomy. The author states that the essentials in any method of establishing a permanent opening in the stomach, are: first, the operation should be simple and capable of rapid performance; second, the resulting fistula should be a long one, and preferably, take an angular course; third, it should pass through muscular fibre capable of a sphincter like action. He thinks this best fulfilled by Albert's operation. Fourth, most patients submit themselves for gastrostomy, only when reduced in strength from starvation and toxaemia, hence the main indication in after treatment is to apply, 1st, fluids for working the vascular system, kidneys and bowels. 2nd, stimulants. 3rd, food. The gastric functions having been long in abeyance, fluids predigested must be given, frequently, and in small quantities at first. During the first 24 hours, 5 oz. of peptonized milk, 100 Fahr. and ½ oz. brandy may be given every three hours. If thirst be urgent, an enema of a pint of tepid water may be given by syphon tube. On the second day, provided there is no vomiting, 10 oz. of peptonized milk and water—equal parts, may be given at similar intervals. As cough and tenacious phlegm trouble the patient and prevent sleep in nearly all cases (a true "stomach cough") especially in those whose stricture is high up, a 5 minum dose of nepenthe or laudanum should be included in the evening feed, and acts like a charm. On the third day, dilute hot broth may be alternated with milk. On the 4th day milk half peptonized and half plain may be used, giving the gastric function a chance of resuming work. If any discomfort ensues, the former may be gradually replaced by the latter. Pepper and salt should be added to all foods to stimulate digestion. Benjor's food, thin gruel, beaten up eggs, and various farinaceous preparation may be added, and when the large sized tubes come to be worn, minced meat and vegetables may be passed down a large bore glass funnel by aid of a glass rod or plunger, at least once a day, with or without previous mastication by the patient. The bowels are relieved at first by simple or turpentine enema, and later by an aperient, given with the evening food. Any attempt to swallow, even liquids, should be forbidden. If the fistula rapidly enlarges and requires constant increase in the size of the tubes, leaving it out between meals allows of a rapid diminution. J. H. D.

GYNECOLOGY.

UNDER THE CHARGE OF

A. W. ABBOTT, M. D., F A. DUNSMOOR, M. D.
J. H. RISHMILLER, M. D

ABDOMINAL VERSUS VAGINAL SECTION IN PELVIC SURGERY.

Joseph Price (Am. Gyn. and Obst. Jour. Vol. XIII No. VI.) staunchly promulgates abdominal coeliotomy and as vigorously condemns vaginal section with a ring of dogmatic prejudice. The operators who oppose the vaginal route are influenced by the logic of their experience and by purely surgical and pathological reasons. The supra-pubic is the operation of their choice because it affords more satisfactory results, is followed by less dangerous or annoying sequelae and lessens the risk of repeated operations. The difference between the advocates of the abdominal method and those who criticize it, is that the advocate of the supra-pubic route speaks according to his knowledge and experience, while the critic according to his failures and prejudices. The one has uniform success, the other humiliating failures. The author states that the successful operators, American, English and German have practiced both methods for years adopting the supra-pubic for tubal and ovarian diseases and the vaginal for malignancy.

We are slow to abandon a procedure which we have found to be safe, and strongly indisposed to believe that there is a better way. An opera-

tor cannot lay down dogmatically any procedure from which he ought not to depart. The most skillful operator never knows until he enters the abdomen the exact and entire condition which he will encounter. When signs and symptoms are not positive the supra-pubic route is the safest.

The fault, with imperfect and incomplete surgery by the abdominal route, lies not in the procedure but in the operator. Whatever the procedure, the lack of discreet courage and sound surgical judgment is responsible for many failures. Complications inoperable from above make them likewise from below. Pathological conditions are easier removed from above because the structures are clearly defined by palpation and sight. The operation can be made with mathematical certainty in its limits and it enables the operator to free omental and intestinal adhesions and repair all disorganized parts.

The most disappointing post-operative symptom is the pain due to the leaving of omental and intestinal adhesions. Badly selected ligating material has been responsible for much post-operative sequelae. Ligating with coarse and heavy ligatures makes insecure work. It is difficult to tie a surgical knot tightly and securely with coarse material and such ligation often is followed by hemorrhage. Commercial articles are never safe and the operator should prepare his own suturing material.

He claims that it is meddlesome and dangerous surgery to extirpate a septic uterus. Likewise he is amazed to observe experienced surgeons deliberately extirpate the little healthy uterus and pass by pathological lesions and complications constituting the real and only source of trouble. "In presence of chronic disease of the appendages he was a wise man who refrained from active interference with the uterus."—Bantock.

Prominent operators by the vaginal route urge the removal of the uterus because of its numerous lesions; this is an error, the lesions are commonly found to be of viscera and surrounding organs. In ectopic gestation the fruit sac is frequently found adherent to the uterus but is easily stripped from it by the abdominal route and leaves a healthy uterus. In extra-uterine pregnancy therefore the removal of the offending side leaves a healthy child-bearing woman.

J. H. R.

COMPLETE INCONTINENCE OF URINE.

L. Grant Baldwin, Brooklyn (Am. Gyn. and Obst. Jour. Vol. XIV, No. 11.) reports some unique cases with gratifying results. The class of cases which he considers are those due to injury to the anterior vaginal wall causing a prolapse of the upper one third of the urethra and to a certain degree the neck of the bladder. In his cases the urethra was not dilated and he states incontinence does not follow as long as the urethra was not loosened from its fascial attachments. The author believed that the muscular coats of the bladder and urethra in incontinence are less involved than their fascial attachments. Patients with the least demonstrable lesion of the urethra and bladder will suffer often times more from incontinence than others with extensive lacerations. He cites, as causes, child-birth and obstinate constipation. As the head passes into the true pelvis the anterior lip of the cervix can be pushed up over the occiput and later, as the head comes down to the pelvic floor, it can be carried up behind the symphysis pubis. If this point would be observed fewer cases of cystocele and urethrocele with partial or complete incontinence of urine would come under the gynaecologist's observation.

Case 1.—Mrs. H., aged 64 years, four children, youngest 20 years old, no miscarriages; menopause at 46. Labors had been normal. Patient had been suffering from incontinence of urine when on her feet for the past six years. In the sitting position she had partial control. Bowels regular. Urine normal. Upon close examination of the urethra it was found to be prolapsed at its upper third. A small and short Emmet hard-rubber pessary gave immediate and permanent relief. The author is unable to explain why the incontinence should date back only six years—her period of widowhood—instead of 20 or more years to the birth of one of her children.

Case 2.—Miss X (sister of charity), aged 30 years. Obstinate constipation had existed from childhood, and she would sometimes pass a week without having a movement of the bowels. She had no control over her urine either sitting or standing and only to a certain extent when in bed. On rising in the morning she had to empty her bladder at once, or else the urine escaped until the bladder was completely empty. The uterus was found to be of normal size and in proper position. Urine normal. The author states that "The urethra was torn from its moorings back of and underneath the arch of the pubis." Her constant worrying over her distressing condition had made severe inroads on her general health. The writer tried an Emmet pessary as in Case One, but of no avail. During the succeeding two months he tried various modifications of the ordinary pessaries without benefit. Finally he tried a round ball of the ordinary white rubber—purchased from the toy store, which afforded complete relief. Afterwards he substituted one made of pure rubber. They were 1¾ inches in diameter, and the patient has worn the last unconsciously and with perfect relief for the past six months. J. H. Rishmiller.

CONSERVATIVE TREATMENT OF THE DISEASED OVARY.

J. T. Johnson, Washington, D. C. (Am. Gyn. and Obst. Jour., vol. XIV, No. 1), presents a judicious and discriminating plea against sacrificial surgery of the adnexa. He states that the

difference between the radical and conservative treatment of the diseased ovary is difficult to define, as the most radical treatment is sometimes the most conservative. Likewise under some circumstances the most conservative treatment would be the most radical.

The fear of opening and manipulating within the abdominal cavity has disappeared, but the chief object in mind is how to close it so as to prevent hernia. We nowadays frequently flood the abdominal cavity with quarts of normal salt solution, thus warming up the somewhat cooled abdominal viscera, and at the same time performing an actual transfusion. The author states that real conservatism is gaining ground to such an extent over real radicalism that an operator who presents adnexiae and uterine fibromata in a modern medical society has, in order to escape criticism and censure, to give good reasons why these important organs were sacrificed. The operative mortality at present for the removal of fibroid tumors, in a surgically clean environment, averages better results than formerly its sister operation of ovariotomy.

By the more conservative method in enucleating fibroids the patient is freed from the burden of her neoplasm and at the same time escapes being mutilated and blighted. For a score of years Battey, Heger, and Tait set the pace for radical operation. When a laporotomy was performed for the removal of an ovarion cystoma the appendages on the other side were likewise often removed, provided they showed any sign of being even slightly diseased, with the apology that some day they might become diseased. It requires a higher degree of skill to save a diseased member than it does to ablate it.

The writer emphasizes the disagreable symptoms accompanying the artificial menopause as being rather stormy and protracted and in some instances resulting in actual insanity. Menstruation is generally not interrupted by saving a portion of one ovary and sexual feelings undergo none of those peculiar revulsions which unfortunately follow total ablation of both ovaries and tubes.

Dr. Dudley, of New York, reported at the last meeting of the American Gynoecological Society, a brilliant series of 103 conservative operations, without a death. He did not hesitate to cut away the diseased portion of the tube and suture the healthy end to the healthy ovary. In some cases he irrigated the remaining portion of the tube with an antiseptic fluid and stitched the tube to the ovary. In other cases where one ovary and tube had been removed on account of a neoplasm or abscess, and the other adnexia was found somewhat involved, the diseased portions were resected and the healthy portions stitched together. Gestation occured subsequently in several such cases.

The author mentions that menstruation is looked upon by most patients as a curse or a great inconvenience although very few welcome its disappearance. Some women believe that artificial menopause is the beginning of old age which they dread, and the feeling that they are so "different from other women" carries with it an undefinable abhorence.

In tubo-ovarian abscesses life-saving results have been effected by making a vaginal section and draining the pus-cavity per vaginam. Thus in many instances unexpected symptomatic, practical and permanent cures have been effected. If a surgeon follows ironclad rules and separates firm and numerous intestinal adhesions until he reaches the pus-cavity, he runs many more chances of operating his patients to death than if he had made a conservative vaginal section, removed nothing but the life-destroying pus, irrigated and drained the pus-cavity and put the patient to bed within ten minutes without shock and hemorrhage. J. H. Rishmiller.

PEDIATRICS.

UNDER THE CHARGE OF

H. B. SWEETSER, M. D. J. P. BARBER, M. D.

SOME PREVENTATIVES.

Dr. A. Jacobi, (The Philadelphia Medical Journal, Dec. 10th, 17th and 24th, 1898.) in his usual vigorous style touches with a master hand upon several very interesting and important subjects.

Seasons and climates, race, city or country, soil and dwelling, precocious marriages, financial circumstances, the price of dress goods, the prevalence of endemics and epidemics, of alcoholism and syphilis, the ignorance of the people and of medical men, are among the most influential causes of excessive infant-mortality. Many of them could be prevented by social improvements, which have to go beyond the puny efforts of floating hospitals and fresh air piers. * * *

As the principal mortality of the first year is due to disorders of the digestive, and that of the following period to those of the respiratory organs, the preventative measures to be taken appear to be self-evident. Infant feeding has been made relatively safe by the methods calculated to destroy pathogenous germs; he says pathogenous, for the presence of others in the milk of women, and in the meconium, and in the stomach of the newly born as early as a few hours after birth, is either indifferent or beneficial. By rendering infant food germ-free, a number of diseases and deaths are prevented; mainly, the army of infectious intestinal disorders, with consecutive renal, meningeal, encephalic, and respiratory troubles, not to speak of chronic marasmus that swells the death lists often without an appreciable anatomical cause.

Beyond the means of prevention furnished by bacteriology, we have not advanced much these scores of years. The same questions belonging to the chemistry of milk, and of the composition

of infant food, are answered differently in different quarters with equal assurance. A famous author, in spite of the physiological fact known these 30 years, that there is saliva and pancreative juice in the infant economy, has only lately been converted to a faith in farinaceous foods, and is experimenting with other than milk sugar, and he comes to the conclusion, based on many sleepless nights, that the feeding on woman's milk may be carried on too long. Many begin also to find out that cows milk may be done to death by inconsiderate cooking, and the latter is not rendered more sacred or more wholesome by calling it sterilization.

The belief that infants and children require much food is correct. They require material not only for reproduction but also for increase. In order to gain 25 grains daily during the first half-year, they require daily from 8 to 10 grains of proteid, 2.6 of which are demanded in the interest of growth. But over alimentation during a normal condition has its serious drawbacks which should be prevented: dilatation of the stomach, and diarrhoeal disease, rickets, adiposity, diseases of the skin, convulsions, biliary and renal colic, and myasthenia and myalgia depending upon the accumulation of phosphates, and lactates in the muscular tissue. Over-alimentation may lead to atrophy in different ways, so that the diagnostician of a case of atrophy has not to look for starvation in intestinal diseases only. When the stomach is too full the gut does not digest. A few months ago, before the Moscow congress, Von Mering detailed the following experiment: He cut the duodenum and sewed the two ends to the abdominal wall. When the stomach was full, and the intestine was full, the function of the stomach ceased. When the intestine was empty the stomach would work and discharge its contents. Until then, no normal secretion of hydrochloric acid would take place, but decomposition only. In this way stuffing leads to illness and atrophy. This may happen besides, for reasons that we should be anxious to discover. When there is a sufficient amount of food, and when the stomach and the intestines and the feces appear to be quite normal, so that there is no sugar, and but little albumen and fat left in the feces, even the bowels were found sterile in such cases. The only changes discoverable were in the middle-ear, in the bladder and the pelvis of the kidneys, which may have been infected from the intestinal tract. These infants suffer from pain and sleeplessness furunculosis, phlegmons and gangrenes. This is one of the many classes of disorders in which the ubiquitous claims of bacteriology are not sustained. We have to return to organic chemistry to fathom the most occult mysteries of nature.

"In a short evening the problems of infant feeding cannot be solved. Permit me only to add a few fragmentory axioms that I look upon as best fitted to improve the infants health and to prevent disease; Cow's milk can never be made like woman's milk. Their physical and chemical compositions differ; mere dilutions do not change the abnormal character of cow's casein. Farinaceous decoctions protect the infant against the abnormal casein better than water. Milk-sugar, though contained in milk, is not always the best sugar to be added to artificial foods. Plenty of water in the food of infants prevents many forms of dyspepsia, and secures normal function of the kidneys and of the liver.

Infarctions of uric acid are frequent, and those of a hemorrhagic and pigmentous nature are not infrequent, and calcareous deposits are at least of occasional occurrence in the kidneys of the newly born. Gravel and stone are frequent in infancy. All these foreign masses lead to disintegration of the endothelia, to hemorrhage, and to inflammation. Moreover, the rapid destruction of the red blood cells in the normal newly born, and the transformation of hematine into hematoidin, which is identical with bilirubin and biliverdin, lead to obstructions and thromboses. It is a large supply of water that should be given to every newly born as a matter of course, while the milk supply is absent or scanty, that will prevent many of the dangerous ailments of the first weeks of life.

An exclusive cow's-milk diet is a mistake, no matter whether pasteurized or sterilized; it may cause one-sided over-alimentation, such as has been described, and occasionally it produces, or aids in producing, scurvy. Cow's milk and farinacea require an ample supply of salt.

Patented artificial foods are modern achievements markedly beneficial. Like the compound pills of the wholesale druggist which are dumped on your office tables, and the medley of composite sweatshop productions of the wholesale book-manufacturers, artificial foods produce horses and carriages, town-mansions and country villas, bonds, stocks, and bank-directorships.

The treatment of the intestinal tract is partly dietetic, partly mechanical, and partly medicinal, as of most diseases of other organs or systems. Disorders of the bowels, which could have been removed, lead to disturbance of the temperament and of the mind, to night terrors and convulsions, to rachitis, to intestinal absorption with fever and erythema and other skin diseases, not quite rarely to peritonitis, to cystitis from the immigration of intestinal bacteria, and to toxic nephitis; in other not uncommon cases to visceral abscesses. Most of what has been mentioned is preventable by medicinal and dietetic treatment; and the old physicians, with their maxim, "qui bene purgat, bene curat," hit the nail quite frequently.

What is meant by prevention—prevention of death—in acute febrile diseases may find a brief illustration in the roborant and stimulant treatment of pneumonia. During health, the innervation and force of the heart are not easily disturbed, but every pulmonary disease taxes its powers. There is no pneumonia that may not require cardiac stimulation sometime or other, for the heart is sure to suffer within a few days from dilation, first of the right side. To what extent this occurs cannot be foreseen. The princi-

ple of waiting for symptoms to turn up is a bad one. If medication were injurious by itself, that would be an excuse for not resorting to it. When heartfailure or collapse, however, has once set in, our remedies are mostly too late. Then to busy ourselves with our subcutaneous, medicinal or rectal hot-water injections or a perfunctory dose of digitalis, not "ut aliquid fias" but "ut aliquid fieri videatur" is preposterous.

The weakness of the heart is by no means physical only, viz: the result of the over exertion caused by the difficulty met by their blood in its passage through the lungs, but it is dynamic and physiologic. Like all other infectious fevers, pneumonia acts probably by its toxin on the functions of the heart-structure and by impeded circulation the heart is certainly injured in its own nutrition. As far as the facilitation of pulmonary circulation is concerned it is not improbable that strophanthus acts even better than digitalis; at least physiologists like Cushing tell us so. The inference is that whenever we require an improvement of the pulmonary circulation for the purpose of oxygenation and of the aortic circulation in behalf of nutrition, and of the rapidity of circulation in order to facilitate the elimination of toxines, we shall do well to use strophanthus and digitalis in combination.

Who is it that made the rule that a prescription must contain one drug only, not two, nor three, though they chemically be ever so compatible, if not the nihilists who preach that there is nothing in medicine but autopsies, and that medicine is a science, not an art; or, perhaps it was only exaggerated antagonism to the yard-long theriacs of the Middle Ages. If there is in illness an uncomplicated condition, give an uncomplicated drug; but be sure that the organ to which you direct your remedy is also simple and uncomplicated. Is there such a thing? Let me again take the examples of the heart. When we speak of heartfailure, or of a debilitated heart, does not that mean more than the flabbiness or over extension of an India-rubber bag? A heart is composed of muscular, intercellular, fatty, elastic tissues; it supplies all the organs with blood, and is itself thus supplied. Its circulation is pulmonary and nutrient. Its blood-vessels are exposed to all the anomolies of all the other blood-vessels. In its nerve supply there are sympathetic ganglia and fibers; there is the pneumogastric, there are fibers coming from the medulla, and in the medulla there is the head-center of the circulation. Its normal innervation is that of the contracting muscle and of inhibition besides. If this compound body fails in its cooperative action, is it probable that a single drug will restore it in all instances? In some, certainly, for the strengthening of inhibitory power is often sufficient to gradually restore the equillibrium, but in many cases the circumstances are not so simple. Digitalis acts in many ways; according to Traube the slowing of the heart's contraction is its main effect; but aconite has a similar effect without any muscular influence. Digitalis increases arterial pressure, so does strychnine; digitalis causes diuresis by raising tension in the renal arteries; it has that effect in a lesser degree than strophanthus, which influences the arterioles less markedly. Digitalis also raises the blood-pressure, and thereby inproves the nutrition of all the tissues, that of the heart included. To its action on the heart and also on the arteries, is due the rapidity of the circulation; when, however, its contracting influence on the small arteries is too intense, that rapidity is stopped. To restore it nitrites are employed. Strychnine increases arterial pressure without an inhibitory effect. That is why when only a moderate amount of inhibition, but competent pressure is required, small doses of digitalis should be combined with good doses of strychnine. Inhibition is paralyzed by atropine; that is why larger doses of digitalis are both tolerated and beneficial when combined with atropine. Spartein has little direct action on the heart muscle and depresses the inhibiting pneumogastric; that is why digitalis, when its muscle effect is demanded, is borne when combined with spartein, in fair doses, for a long time in succession. Such combinations are not only permissable; they are requisite. Such combinations, say of 4 decig. daily of digitalis or its equivalent with half the amount of spartein may be given for six weeks with perfect safety without going to see the patient and with no cumulative effect; the latter can not always be avoided when digitalis is given alone. Combinations of so-called heart stimulants may be much more various. Like strychnine, ergot effects the medulla and the spinal-cord centers. Caffein, camphor, and ammonia stimulate both the heart and the vaso-motor centers; hydrastis both the vaso-motor centers and the peripheral vaso-motors. Adonis appears to be almost identical with digitalis in its cardiac and arterial effects; strophanthus, with its modified action on the heart and principally on the arteries, finds its associates in convallaria and apocynum.

Statistics are said to prove that pneumonia will get well without medication. Which pneumonia, and whose? It should be a great satisfaction to a man dying of pneumonia to learn that his neighbor got well without medication, if stimulation in time, perhaps venesection, might have saved his own individual life. It is the duty of the physician to judge of and to treat his individual case, and not the pneumonia of Louis, and of Deitl, and of other statisticians. Treat the man who is sick and not a Greek name. J. P. B.

To overcome longing for drink, due to irritation of gastric nerve supply:—

℞. Chlorinated water, 2 drachms, Decoction of Athaea 5 ounces, cane sugar 2 drachms.

M. Sig. A tablespoonful every two or three hours. Zdekauer.—La Med. Mod. Jan. 12, '95.

Disgusting an inebriate of alcoholic intoxicants is not to cure the disease of inebriety, or narcomania.—Sajous' Annual, Vol. 1, p. 224.

Neurology and Psychiatry.

UNDER THE CHARGE OF
R. O. BEARD, M. D., W. A. JONES, M. D.

THE OCULAR EVIDENCES OF HYSTERIA.

Casey A. Wood (Amer. Jour. of Med. Sci.). The author's conclusions are, that:

1. Most cases of hysteria present well-marked easily detected eye-signs and symptoms.

2. A few ocular symptoms, such as reversal of the relation of the color-fields and the field for white, the tonic form of blepharospasm, spasm of accommodation and convergence, and pseudo-paralytic ptosis, may be regarded as pathognomonic of hysteria.

3. Defects of vision (in the absence of refractive errors, accomodative anomalies, and fundus lesions) are, generally speaking, hysterical if accompanied by photophobia and any form of blepharo-spasm.

4. No examination of a patient for ligeteria should be regarded as complete without considering the condition of his ocular apparatus.

5. Where there is no conclusive external evidence of the neurosis present, the perimeter should be carefully used, the range of accommodation noted, and the opthalmoscope employed.

6. It should be remembered that ocular hysteria is common in children and in men.

7. Organic disease (traumatism especially) of the eye may accompany purely functional disturbances of that organ.

An editorial in the Journal of the American Medical Association of Jan. 21st, makes an interesting suggestion regarding epileptics under the title "The Convulsive Face." It says; "We frequently see in children, and even in adult epileptics, the convulsive hand, consisting of a flexing grasp of the fingers in the palm over the flexed thumb. And often, after a sever epileptic fit, the patient remains as in a mold fashioned by the convulsion. Nowhere in the physique is this phenomena more plainly seen than in the facial features. For days after the convulsion the facial muscles are incapable of acting in unison in emotional and purposeful acts. The lips have an uncertain tremulous movement in speech, from which action alone epileptologists are often able to declare that a seizure has occurred. To the casual observer the face in this disease may give no impression beyond a possible one of premature aging or a dulling of the facial appearance in those most afflicted, but experienced observation will disclose a peculiar sharpening of the naso-labial fold, persisting most in action, a lack of unity of expression about eye and mouth, in which probably the most signal failure lies in the discord of cerebral impulses. For years the speech of the epileptic has been known to be highly diagnostic, due for the most part to its arythmic character. We might describe the epileptic face best if we were allowed to say that the arythmia of sound in speech finds counterpart in the disordered play of expression of the face." W. A. J.

SUB-ACUTE COMBINED SCLEROSIS OF THE SPINAL CORD, AND ITS RELATION TO ANEMIA AND TOXEMIA.

Charles L. Dana (Jour. Nerv. and Ment. Dis.), claims that there is a group of cases showing ataxic paralysis with sub-acute course, which should be recognized as a distinct clinical type. He reviews briefly the literature, and then gives an account of a typical case including the histological examination of the cord.

The initial symptom is a persistent paresthesia usually of the feet, associated with some weakness of the part and followed by considerable ataxia. There is at first an increase of knee-jerks, and sometimes ankle-clonus and rigidity, but later the spasticity decreases and the knee-jerks disappear. Tactile, thermic and pain anasthesia are not marked until late in the disease, but the patient often has severe pains in the back and legs. The arms are involved later, or the first signs of trouble may begin in them. An anemia which may be of the pernicious type, but is usually secondary is present. The course is short requiring from six months to a year to reach its height. Control of bladder and rectum is finally lost, and paralysis and contracture of the lower limbs are present. The author considers the disease as of toxic origin, and suggests that as it belongs to the degenerative period of life it may be due to a premature senility of the bloodmaking organs. It is not likely that the change in the spinal cord is primary.

The microscopical examination showed that the posterior columns of the spinal cord are first involved, and that the disease appears to start in certain foci in the lower dorsal or cervical cord,and later to spread throughout the entire length of the columns. The lateral columns and especially the crossed pyramidal tracts are severely affected.

The disease is distinguished from locomotor ataxia by the absence of syphilitic history, the rapid onset, the anemia, the motor weakness, the absence of ocular symptoms and of lightning pains. From multiple neuritis it is distinguishable by the slow onset, the marked ataxia, the absence of muscular wasting, tenderness, and pain, and by the development of bladder and rectal symptoms. The existence of marked anemia, and especially of pernicious anemia, is, taken with ataxia, paralysis and rapid course pathognomonic.

W. A. J.

A CASE OF ERYTHROMELAGIA, WITH MICROSCOPICAL EXAMINATION OF THE TISSUE FROM AN AMPUTATED TOE.

S. Weir Mitchell and William G. Spiller (Amer. Jour. of Med. Sciences). The pure type of the disease is seen in the younger adults. In these the foot while held in a horizontal position may show no flush, and there may be no pain, although when the foot is lowered the arteries throb, the temperature rises, and the redness becomes intense.

The present case occurred in a man of sixty-five, and showed some variations from the type. In July 1897 the patient began to have limited areas of savage pain in the right foot, which varied in location but were accompanied with tenderness and extensive flushing. While the fourth and fifth toes were involved, a small, deep and painful ulcer developed on the outside of the fourth toe which healed slowly. Finally the trouble became localized in the great toe and a small ulcer formed under the nail. The heart was very feeble, the arteries were soft, the urine negative; the affected limb was not wasted but the right knee-jerk was increased, the ankle jerks were excessive though no clonus was present, and sensation was normal. As the pain was intense and could not be relieved, amputation of the toe was performed. A slough formed in the lower part of the wound, and it healed but slowly. Pain has occurred at times in other parts of the foot since operation and the authors doubt whether the patient will receive any permanent benefit.

The microscopical findings are most interesting. The nerves show intense degeneration. The bundles are composed wholly of connective tissue, with only here and there a nerve fibre appearing, and even in these occurs irregular segmentation of the myelin. The vessels show equally marked change. The media is thickened, and the intima is intensely proliferated, so much so that in some cases it nearly closes the lumen. The veins show thickening. The bones also are larger than in the normal adult skeleton.

No opinion is expressed as to the seat of the primary lesion in this case, and attention is drawn to the fact that arterio-sclerosis is common at this age, while erythromelgia is rare. The preservation of sensation in the great toe, the nerves of which were so greatly degenerated indicates that sensation may obey different laws from those governing motion. W. A J.

VELOCITY OF SOUND.

The latest calculation of the rate at which sound waves travel through air has been made by W. A. Leduc (Comptes Rendus, Dec. 26, 1898,) who finds that the rapidity of propagation of sound waves in a dry atmosphere at 22 degrees F. is 1088.58 feet per second.

OBSTETRICS.

A. B. CATES, A. M., M. D. R. E. CUTTS, B. S., M. D.

THE RELIEF OF SUFFERING IN OBSTETRICAL PRACTICE.

Dr. Fothergill (Lancet, Jan. 28th, 1899,) in a paper delivered before the Clinical Society of Manchester, England, "On the relief of suffering in obstetrical practice" held that the first duty of the obstetrician was to relieve suffering. This was to be secured, firstly—by careful attention to a number of details, secondly—by the use of chloroform during the second stage. Of the first, minor methods were such as hot bath and suggested the bath room as the most comfortable place to pass the greater part of the first stage. In dry labor Dr. Ribe's bag or manual dilatation was recommended to shorten the first stage while a short administration of chloroform was recommended in colicky uterine action and in spasmodic rigidity of the cervix. Quinine and cocaine were also useful in this stage. In the second stage a few whiffs of chloroform may be given during every pain, to be increased to deeper anaesthesia during the last few minutes previous to delivery. Chloroform did not increase bleeding nor was the babe injured; and should labor be prolonged it could be completed by the judicious use of the forceps. In operative cases chloroform should always be given. Dr. Fothergill further says, "It is to be regretted that in that district forceps extractions, turning, craniotomy and removal of adherent placentae were frequently done without anaesthesia.

R. E. C.

A NEW METHOD OF INDUCING PREMATURE LABOR.

Spinelli described at the Congress of Obstetricians and Gynecologists in Turin, a new method of inducing premature labor which consisted in introducing the index finger into the cervical canal then passing beyond the internal orifice, (in primiparae the canal should be previously dilated) the inferior portion of the membranes is gently torn with the hooked finger and by the guidance of the finger a strip of gauze impregnated with glycerolate of ichthyol is inserted which should be placed between the ruptured membranes and the uterine wall; this operation can be performed best by drawing down the uterus by means of a forceps applied to the posterior cervical lip. The vaginal canal is then packed with sterilized gauze; labor usually occurs in about ten hours. The author describes ten cases treated by this method.—N. Y. Med. Jour., Jany. 7th, 1899.

(In cases of miscarriage with only partial emptying of the uterine contents, and in which the contractions fail to develop sufficiently to

complete the process, packing the lower segment of the uterus and cervical canal with 5 per cent. iodoform gauze and supported by packing the vagina with sterilized gauze soon causes softening of the cervix and development of uterine contractions sufficient to accomplish the desired result.) R. E. C.

DRY LABOR.

Broadhead (Univ. Med. Mag. Dec., 1898,) says in 15 per cent of labor cases the membranes rupture prior to or during the first pains. In such cases the foetal dangers are asphyxia and meningeal hemorrhage while the maternal dangers are laceration of soft parts, oedema, pressure, necrosis, hemorrhage, sepsis, slow convalescence and uterine rupture. He advises to begin the labor as soon as possible after the rupture of the membranes by giving a full dose of castor oil in glycerine followed in a short time by ten grains of sulph. of quinine. The latter to be repeated every three hours. Strych. sulph. gr. 1/30 should be given every two hours up to the physiological limit. Thorough asepsis by soap and scrubbing should be carried out. This was to be followed by douching with bichloride 1/2000 or a lysol solution every six hours. The forceps should be used in the second stage if prolonged. R. E. C.

A CASE OF INVERSION OF THE UTERUS.

Dr. C. J. Ringnell reported at the Hennepin Co. Medical Society, Feb. 6th, 1899, a case of inversion of the uterus following confinement. The patient had been delivered by a midwife and as the placenta did not come away readily she introduced her hand into the uterus—directly, seized the afterbirth and removed it by direct traction. After removing the placenta she found the vagina filled with something which she supposed had to come away and kept manipulating it with that end in view until Dr. Ringnell saw the case several hours after delivery. There had been a constant loss of blood from the surface of the placental attachment, and the patient was so exsanguined that she lived but a short time, dying before replacement could be affected. Dr. Ringnell exhibited some splendid photographs of the specimen. R. E. C.

BREECH PRESENTATION.

Dr. Edward A. Ayers, of New York, in the first of a series of articles on "Physical Diagnosis in Obstetrics," published in his new journal, "Obstetrics," has the following concerning breech presentation.

"The average infant mortality in head presentations occiput auterior, is estimated at from two to six per cent. In breech deliveries it is from 20 to 25 per cent. Not all cases of breech presentation can be corrected before labor unless seen early in pregnancy—the seventh month. Many such cases will correct themselves. Some that are corrected will return to a breech.

The following rules apply: Do not interfere with a breech presentation in cases of placenta praevia, marked pelvic contraction, abnormal growths in or around the pelvic portion of the uterus, twins, when mobility of the foetus is too slight to render external version easily; when mobility is too great to render it likely that the foetus will remain in a head presentation or after the breech has become inpacted in labor. Perform external cephalic version when in the last four weeks of pregnancy the position in breech is becoming established and when no special reasons exist for a breech delivery provided such version is not difficult. Do not put the foetus in greater danger than from breech delivery. Choose if the conditions allow, (the last two weeks of pregnancy for doing version."

(The per cent. of mortality represented by the figures given above is twice as large as is generally conceded. A premature non-viable child and a dead foetus should be added as contraindications to cephalic version.)

A. B. C.

THE PRACTICAL APPLICATION OF ASEPSIS IN NORMAL LABOR.

Dr. J. Clifton Edgar in an address at the University of Pennsylvania on "The Practical Application of Asepsis in Normal Labor," published in the Medical Record of Feby. 11, 1899, says, "The microbes which are known to cause puerperal infection do not exist in the healthy vagina at all or are in a state of innocuousness. The gonococcus is occasionally found in the vaginal secretions. When pyogenic cocci are found in the puerperal uterus they have been introduced from without (Williams). As the vagina does not contain pyogenic cocci, auto-infection with them is impossible (Williams). Pyogenic cocci do not exist in a state of activity on the vulva and in the vulval canal." After thorough cleansing of the vulva the separation of the labia with the thumb and middle finger of left hand is recommended while the finger of the right hand is inserted into the vagina, avoiding contact with the labia and hymen or its remains, as far as possible.

A VERY SMALL BABY.

There is at present a female infant at Governeur Hospital, New York, said to be perfect in its development in every respect except as regards size; at the age of two months she weighs but 32¾ ounces. When born her weight was only 16 ounces.—(Boston Medical and Surgical Journal.)

AIR-EMBOLISM.

Begouin has investigated the mechanism of death for air-embolism, and finds that the rapidity of death depends rather upon the amount of air in the right ventricle and on the rapidity or

force with which the air is introduced. These factors determine whether the asphyxia shall be rapid or slow. On the postmortem examination the author found the right ventricle greatly distended with frothy blood. If a fine trocar was passed into the right ventricle after the admission of air by the veins and aspiration was performed, death did not take place, but the animal recovered after a short time. He concludes, therefore: 1. That death is due to distension of the right ventricle by air, and, secondarily, to right-sided asystole. 2. That removal of the air by aspiration allows the ventricle to react.—Am. Year Book of Med. and Surg. p. 657.

CLINICAL MICROSCOPY.

UNDER THE CHARGE OF

J. FRANK CORBETT, M. D., G. D. HEAD, M. D.

LEUCOCYTOSIS IN LABOR AND THE PUERPERIUM.

In the Journal of Experimental Medicine Vol. 3, No. 6, Hibbard and White contribute an article giving the results of their work upon the examination and enumeration of the white cells of the blood in 55 cases of women in labor or the puerperium.

They arrive at the following conclusions:

1. A leucocytosis was present in over three fourths of their cases being more frequent and higher in primiparae.

2. During convalescence the count falls at first rapidly, later more gradually.

3. Leucocytosis is higher in younger women regardless of the number of pregnancies.

4. Patients farthest advanced in pregnancy have the highest counts.

5. Leucocytosis present at the time of labor is due to an increase of the polymorphonuclear cells.

Of the cases counted four were complicated by inflammation of the breast. All these showed at the time of the febrile attack a leucocytosis (11-16000.)

The authors raise the question whether a white count in these cases would be of any value in detecting the presence of pus.

In answer to this query it might be suggested that the height to which the count might rise would serve to differentiate between suppurative and the non-suppurative breast inflammation. The white counts made by the writer in these cases of breast abscess range between 25-32,000 white cells to the C. M. M.

BLOOD IN THE URINE.

Rules for determining the location of the hemorrhage by microscopical study.

1. If the blood corpuscles occur in casts the source of the hemorrhage is the kidney.

2. If the blood corpuscles appear as pale delicate, rings in the urine (blood shadows), the source of the hemorrhage is the kidney, the pelvis of the kidney, or the ureter urine.

Caution: The blood must be examined fresh. Normal red blood corpuscles will become washed out if allowed to stand for 48 hours in an alkaline urine.

(a) If the hemorrhage originates in the kidney, casts and real epithelium usually accompany the washed out red cells.

(b) If the hemorrhage is from the pelvis of the kidney or the ureter, no casts are present. Pus cells and round, branched, or spindle epithelium may or may not be seen in the urine.

3. If the blood is from the bladder, the corpuscles are usually increased in amount; they retain their normal color. May be crenated swollen or normal in appearance, and usually associated with large numbers of pus cells, squamous and large, round epithelial cells, and masses of bacteria.

4. Blood from the urethra shows the corpuscles normal in color and appearance and occurring only in the first part of the urine passed.

5. In some cases of acute congestion of the kidneys with suppression of urine, the first urine passed will contain an enormous number of red blood corpuscles, normal in color and appearance, without any accompanying cellular elements.

6. In some cases of renal calculus, during the passage of a stone down the ureter both washed out and normal red blood cells will be seen without other cellular elements.

Geo. Douglas Head.

THE GROWTH OF THE TYPHOID BACILLUS IN THE SOIL.

Having observed a number of outbreaks of typhoid fever in what appeared to be a typhoid area, John Robinson concluded that the source of infection was in the soil; but a bacteriologic examination of 30 samples of soil was negative. He then inoculated soil with typhoid germs, and from time to time took samples for investigation. He found that the typhoid bacilli were able to grow in certain soils, and that they could, under certain conditions, survive from one summer to another; the rains of spring and autumn and the frosts and snow of winter did not kill them. The part of the soil exposed to the sun showed no typhoid bacilli; but by scraping down one sixteenth in. from the surface the organisms were found to be present. Cultures of the bacilli planted at a depth of 18 in. grew to the surface, and others inoculated on the surface extended to a depth of 3 in. It is possible that this downward growth may have been assisted by mechanical means, as rain and artificial watering. No lateral spread could be ascertained. Vegetation was detrimental to the healthy growth of the organisms.—Am. Year Book of Med. and Surg.

Among the Journals.

In the January number of the American Journal of Insanity, Dr. Ales Hrdlicka reaches the conclusions that while insanity sometimes stimulates such of its victims as possess the ability to write at all, into writing more voluminously than when in health, the composition is at the same time lowered from its former level both in manner and matter; and that the same is true of picture drawing.

The artistic and literary instinct is sometimes very strong in the insane and with the loss of judgement and a weakened self control these instincts assert themselves, the pictorial and literary efforts resulting, always reflecting the mental states and power of the brain in which they were conceived.

The value of Dr. Hrdlicka's contribution lies in its well selected illustration and comparisons of instances of the above generalization and might be made still more valuable perhaps had it been possible to collect examples of similar efforts by the same persons in health for comparisons in that direction.

The article is confined wholly to a consideration of the literary and artistic work of patients in public institutions. There is an opportunity in this connection for some patient investigator to make an analysis of the work of some writers outside asylum walls. Our decadent literature is full of eroticism. The irruption into literature of the cynic, pessimist, and other partial degenerates, has resulted in chocking the pressess with a mass of morbid exhalations which may take years in falling into deserved oblivion and leaving that which is clean, sane and wholesome in its proper place of permanancy as the true literary product of this century.

Our forefathers used to take cynics and pessimists and duck them in the nearest horse pond under the generic designation of "scolds;"—a proceeding which effectually dampened any ambition to a wider exploitation of individual mental obliquities.

Dr. Hrdlicka's line of investigation is of value also as affording a basis for the erection of certain kinds of symptoms into a scheme for the differential classification of some of the more subtle grades of mental degeneracy as well as for the analysis and study of delusions.

Dr. Irwin H. Neff contributes a paper on "The Tuberculin Test." The reaction to the tuberculin exhibition is generally admitted to be of great diagnostic value and yet, Neff sounds a wise note of warning aginst its indiscriminate use in quoting Kelbs who admits that cases have been recorded in which tubercular foci were revealed in individuals who did not suffer any ill effects from the disease until the wholly latent and inactive foci were lighted up by the test.

It is probably a question to be determined by collateral facts and conditions in each case whether the test shall or shall not be used and the existence of an element of danger in this as in chloroform and many another accepted good should not militate against it.

The particular value of the test is emphasized as being applicable to the insane who are unsatisfactory subjects sometimes for physical exploration and who can give no intelligent aid to the examiner. Further application of this test would seem to be advisable in hospitals for the insane along lines laid down by Dr. Neff in his excellent paper.

Dr. Neff also presents a paper read before the sixth meeting of the Association of Assistant Physicians of Hospitals for Insane at Kankakee on the subject of "Factors in the Prognosis and Duration of the Acute Insanities," in which he deduces from several tables of statistics the dictum that recoveries from the acute psychoses are more frequent than they are according to the commonly accepted percentage allowances, and that heredity does not exercise so baneful an influence in determining chronicity and dementia as is generally believed; nor does it preclude recovery or, of necessity, determine relapse. Acute melancholia occurs twice to one case of acute mania and the recovery rate is higher in the latter, while improved cases of theformer frequently recover after discharge. He attributes the earlier recovery of acute mania to the fact that the cases are earlier sent to the hospital.

The tables are clear and have a bearing on the question treated, a statement that cannot always be made of the confusing complications presented with some of the ill digested articles which appear in medical journals. An article containing many statistical tables must be annotated in a way that will enable the reader to get the milk out of the cocoanut with little effort if it is to attract interest or even be read at all by the busy practitioner; and this Dr. Neff has done.

Dr. Richard H. Hutchins goes into some of the technical minutiae of chemical analysis of the ptomaines and auto-elaborated bodily poisons, laying stress on the value of physiological chemistry in searching for some of the more obscure etiological factors of insanity. This line of investigation is passing through a stage of evolution. We have long passed the point where it was claimed that all cases of insanity were traceable, in part, at least, to a defective renal action, a decaying lung or an intestinal insufficiency. The growing understanding of the relation between nutrition and nerve action must naturally lead to more and more general application in the hospitals, of the methods elucidated by Dr. Hutchins to the study of all those things which can in any way affect the metabolic changes in the nerve cell; and that understanding will also lead to final abandonment of the extreme ideas of enthusiasts who elevate a single truth into a fad and distort all things to fit the preconceived notion.

There are several other papers of merit and interest particularly that of Dr. Kirchoff, of Neustadt in Holstein, on "Recent Views as to the Topical Basis of Mental Disorders" and a thoughful contribution to the study of the relations between "Brain Anatomy and Psychology" along somewhat similar lines.

Altogether the number is unusually valuable in practical suggestion to the alienist and of interest to the psychologist.

E. N. Flint.

Book Notices.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY, being a Yearly Digest of Scientific Progress and Authoritative Opinion in all branches of Medicine and Surgery. Drawn from Journals, Monographs, and Text-Books of the Leading American and Foreign Authors and Investigators, collected and arranged with Critical Editorial Comments by Twenty-eight of the Leading Specialists and writers of the Country, under the General Editorial Charge of George M. Gould, M. D. Illustrated. Price, cloth, $6.50; half morocco, $7.50. For sale by subscription. Philadelphia W. B. Saunders, 925 Walnut street, 1899.

The year book for 1899 maintains the high standard of excellence so apparent in the preceding volumes. Dr. Gould and his collegues do for the reader what he could not without superhuman labor do for himself. The medical literature of all nations is carefully culled, all that is practical and useful is preserved while the chaff is allowed to fly away with the wind| The editor and the collaborations have improved by the experience of past years and their notes and critiques are of especial value to the reader. We predict for this years' annual a wider field than ever, those who have taken the previous numbers will wish to continue, while those who take it for the first time will feel that the volume is complete in itself and affords them a ready reference to the latest and most trustworthy knowledge on any medical or surgical subject. On other pages of this journal will be found extracts from this valuable work.

THE SEXUAL INSTINCT—ITS USES AND DANGERS AS AFFECTING HEREDITY AND MORALS, ESSENTIAL TO THE WELFARE OF THE INDIVIDUAL AND WELFARE OF THE RACE, by James Foster Scott, B. A., (Yale) M. D., C. M., (Edinburgh University). Late Obstetrician to Columbia Hospital for Women, and Lying-in Asylum, Washington, D. C. Late Vice-President of the Medical Association of the District of Columbia, etc., etc., Octavo 436 pages, cloth $2. New York. E. B. Treat & Co. 1899.

The subject with which this volume deals is of a very delicate nature, and has not been an inviting field for the scientific writer. At the same time the necessity for such information as the title implies, and the eagerness with which such knowledge is sought after have called forth a constant flood of quack literature. A work like the one before us, written by a scientific physician, and containing the knowledge which laymen ought to possess should meet with a cordial reception. The work is free from technical terms and is intended for men, not women or boys. The writer adopts a high moral tone and regards purity as the crown of all real manliness He deals with the physiology of the sexual life, the consequences of impurity, perversion of the sexual life, the regulation of prostitution, etc.

The chapter on "Woman and the unmanliness of degrading her," appeals to the best instincts of human nature, and is a powerful denunciation of the libertine. The author makes some very strong and timely assertions on the question of criminal abortion. When it is considered that for every one hundred pregnancies there come to the knowledge of the profession seventeen abortions, and that in all probability an equal number remain unknown to the physicians, the question is one requiring serious consideration. The text is well written, clear and forcible, and the publishers are to be congratulated on the excellent appearance of the book.

LECTURES ON APPENDICITIS AND NOTES ON OTHER SUBJECTS, by Robert T. Morris, A. M., M. D., Adjunct Professor of Surgery in the New York Post Graduate Medical School and Hospital; Fellow of the New York Academy of Medicine, American Association of Obstetricians and Gynecologists, American Medical Association, Member of the New York State and County Medical Societies, Society of Alumni of Bellevue Hospital, Linnean Society of Natural History, etc. Third edition, revised and enlarged, with illustrations by Henry Macdonald, M. D. G. P. Putnam's Sons, New York, 27 West Twenty-ninth St. Lond., 24 Bedford St. Strand.

The subject of appendicitis has been receiving so much attention in the proceedings of societies and in the columns of medical journals that probably its literature for the past decade is more voluminous than that of any other medical or surgical subject. The pathology of appendicitis is now thoroughly understood and thanks to the efforts of Dr. Morris, the practitioner, by the perusal of these lectures obtains all the knowledge necessary for the diagnosis and treatment of these important and ever occurring cases.

In this the third edition of the book the author adopts the blunt dissection of McBurney for entering the abdominal cavity, and the reader cannot but be led to the belief that the description of the technique of the inch-and-a-half incision with its indispensable "guy-line" is as near perfection as possible. Valuable statistics have been added to show that his brilliant results are due to the dropping out of his practice, little by little, of the methods which had a death rate of their own.

Although he may at first be a trifle disagreeably impressed by the egotism of the author, the

reader on a close acquaintance feels that he is in the hands of a safe and trusty guide and is ready to follow.

This is one of the books which no practitioner, who realizes his responsibility to his patients or his duty to himself, can afford to be without.

RECORD OF URINARY EXAMINATIONS. A convenient, Practical Method for keeping Records of Urinary Examinations for Future Reference in Hospital or General practice. Arranged by Harry Morell, M. D., C. M., TrinityUniversity, Toronto. Hartford, Conn., U S. A. J. B. Burr and Company. 1898.

This is a book of charts, octavo size, neatly bound and affording space for chemical analysis, physiologic constitutients in solution, pathologic constitutients in solution, microscopic examination, bacteria and general remarks. By the aid of carbon paper a copy of each report can be made and separating it from the sheet at the perforations, the copy can be sent to the ward or given to the patient or his physician, while the original retained by the analyst. Since one examination of urine is rarely sufficient for a diagnosis the practitioner will find these charts invaluable for reference during the progress of a case.

UEBER TRAUMATISCHE ENTSTEHUNG INNERER KRANKHEITEN. The Traumatic Origin of Internal Diseases. First Part, Diseases of the Heart and Lungs, Pages 193. Dr. Richard Stern. Breslau, Fischer Jena, 1896.

Owing largely to litigant interest a good deal of medical literature has accumulated on injuries and resulting diseases appertaining to the nervous system—it must be confessed, with not well defined results. Meagreness of information about the results of trauma on the structure and function of visceral organs is the rule in our text-books. The results of trauma are left largely to surgeons who have hitherto set too little store by the pathological development of the disease they are about to attack.

"However, it appears more and more that in the etiology of organic internal disease the role of trauma is still by far not enough considered and explained."

The policy of governmental insurance in Germany demands an accurate knowledge of etiology not obtainable in the text-books.

Dr. Stern's bronchure fills this want very acceptably. The details of cases are given, including an account of the nature of the accident, the subsequent history as it develops and the post mortem finds. A basis is thus formed for critical comment.

Part I, now published, concerns itself with heart and aortic diseases, endocarditis from sudden strain and like accidents, muscular and nervous disturbances of the heart and aneurism of the arch.

Chapter II. shows how and what lung affections follow trauma, as pleurisy, tuberculosis and the various pneumonias.

The book is of special value to the teacher or one likely to have to do with traumatic cases or one summoned often into court. H.

THREE THOUSAND QUESTIONS ON MEDICAL SUBJECTS, Arranged for Self-examination, with the Proper References to Standard Works in which the Correct Replies will be found. Second edition enlarged. Price, 10 cents, Philadelphia. P. Blakiston's Son & Co., 1012 Walnut St. 1899.

This little book can be carried in the vest pocket and used during spare moments for self examination. The questions are practical and so comprehensive as to cover the whole field of medical practice. At the end of each question numbers indicate the volume and page in which the answer can be found. No student could form a better resolution than to study these questions until he can answer them all; if he succeeds, no college or examining board can turn him down.

E. B. Treat & Co., New York, will publish shortly the International Medical Annual for 1899. This will be the 17th issue of the Annual and among its special articles will be found the following:

"Practical X-Ray Work," by R. Norris Wolfenden, M.D., B.A.; "Advances in Skull Surgery," by Seneca D. Tubby, M.S., M.B. These articles will be freely illustrated, chiefly by reproductions from photographs. "Climatic Treatment of Consumption," by F. de Havilland Hall, M.D., F.R.C.P. An article on "Legal Decisions Affecting Medical Men," by William A. Purrington, A.B., LL.D., will be found interesting and pertinent. In response to the request of many subscribers there will be found an article on "The Chief Pathogenic Bacteria in the Human Subject," with descriptions of their morphology and methods of microscopical examination, by S. G. Shattock, F.R.C.S., the Pathological Curator of the Museum of the Royal College of Surgeons, London, illustrated by a series of finely colored plates.

ALEXINS.

Alexins are products obtained from cultures of pathogenic microorganisms—the bacillus of tuberculosis, for instance—which, when injected are credited with the power of conferring immunity against the disease which the organisms are supposed to represent.

In a series of experiments, detailed in a report to the Scientific Grants Committee of the British Medical Association, in 1892, E. H. Hankin showed that a few electric sparks of high potential are capable of robbing a pure alexin solution of its power of killing bacteria. How electricity acts in these instances is not satisfactorily explained.—Sajons' Annual Ency., vol.1, pa. 231.

Miscellany.

MEDICAL WORTHIES.

2.

AMBROISE PARE.

By the Editor.

Few names in the history of medicine are more interesting and inspiring than that of Ambroise Pare. His works are as facinating as a romance and his personal history reads like a fairy tale. He was the son of a barber and was born at Laval, in Maine, in 1509. His early education was acquired under many discouragements, for his parents were too poor to send him to school and so he was placed as a foot boy in the house of the Cure of the village. The priest's mule was committed to young Par's care, and the grooming of this animal and other menial duties took up so much of his time that study was out of the question. Later he was apprenticed to a barber surgeon (and promptly showed a taste for minor surgery).

The eminent lithotomist Colot visited Laval about this time for the purpose of operating upon a friend of the priest, who suffered from stone in the bladder. Pare was deeply interested in the performance and was highly elated when the great man invited him to assist in the operation by holding the patients legs. The skill and dexterity of Colot came as a revelation to Pare and he at once resolved to proceed to Paris where he might perfect himself in the Art of Surgery, for which he already showed a special aptitude. The Hotel Dieu was even at that early day a famous hospital and he had the good fortune to become one of its house surgeons, a position which he filled for three years. His conduct and his aptness so attracted the attention of Gonpil the chief Surgeon, that he trusted him with the patients which he himself could not find time to attend.

At the age of twenty seven he received an appointment as surgeon in the French Army and served under Montmorenci in Piedmont. For more than thirty years he served his country as a military surgeon and during a period when wars were almost constant. The treatment of gun shot wounds was crude and barbarous. Under the belief that the missles caused poisoning of the wound, it was thought necessary to pour into such wounds boiling oil of elders; hemorrhage was arested by searing with a red hot iron and when amputation was resorted to a red hot knife was employed. On one occasion Pare ran short of boiling oil and instituted a new procedure.

Let us read the account of this fortunate occurence in his own quaint language:

"I took courage to doe as they did. At last I wanted oyle, and was constrained in steed thereof, to apply a digestive of yolkes of eggs, oyle of roses, and turpentine. In the night I could not sleepe in quiet, fearing some default in not cauterizing, that I should finde those to whom I had not used burning oyle dead impoysoned; which made me rise very early to visit them, where beyond my expectation I found those to whom I had applied my digestive medicine, to feele little paine, and their wounds without inflammation or tumor, having rested reasonable well in the night: the other to whom was used the sayd burning ayle, I found them feverish, with great paine and tumor about the edges of their wounds. An then I resolved with myselfe never so cruelly to burne poore men wounded with gunshot. Being at Thurin I found a chirurgion, who had the fame above all others, for the curing of wounds of gunshot, into whose favour I found meanes to insinuate my selfe, to have the receipt of his balme, as he called it, wherewith he dressed wounds of that kind, and hee held me off the space of two years, before I could possible draw the receipt from him. In the ends by gifts and presents he gave it to me which was this, to boyle young whelpes new pupped, in oyle of lillies, prepared with earth worms, with turpentine of Venice. Then was I joyfull and my heart made glad, that I had understood his remedy, which was like to that which I had obtained by great chance. See then how I learned to dresse wounds made with gunshot, not by books."

Pare's name has come down and will live in history in connection with his use of the ligature. He had not discovered it, although he believed that its employment was original with him. Had he been better instructed in his youth he would probably have read that Celsus, Avicenna Albucasus and other ancient writers had recommended, if they had not actually adopted this method of arresting hemorrhage. It is certain however that the ligature was not in use in Pare's day, and his adoption of it marked an epoch in Surgery. Like many other progressive men he met with personal abuse and one writer Gourmelen, called him a blood-thirsty and cruel rascal. Pare was a voluminous writer and his

works form a folio volume of more than a thousand pages. His disposition was kind and he was beloved by the soldiers. It was his custom to take his leave of the wounded by saying (Je vous pansai, dieu guerera) I have dressed you may God cure you.

If we were to consider his faults we must say that his egotism was remarkable. In one of his writings he speaks of himself as follows, "and if there were four hurt I had alwayes three of them, and if there were question of cutting off an arme or a legge, or to trepan, or to reduce a fracture or dislocation, I brought it well to passe."—"and when wee had resolved to doe any serious worke of chirurgery, twas Ambrose Parey that put his hand therto, where I did it promptly and with dexterity, and with a great assurance, in so much that the sayd physician admired me, to see me so ready in the operation of chirurgery seeing the small age which I had."

He was the first to repair laceration of the perineum bp sutures, and the first to extricate loose cartilages from the knee joint.

The later years of his life were spent in study, in self improvement, in piety and in good deeds. He held the position of physician, chief surgeon and member of the privy council in the reigns of Henry II, Francis II, Charles IX, and Henry III.

He was a Protestant and would have fallen a victim in the terrible massacre of St. Bartholimew but for the personal friendship of Charles IX. Brantome thus discribes the king's rescue of Pare on that eventful night. "He sent to fetch him, and to remain during the night in his chamber and ward-robe commanding him not to stir, and saying that it was not reasonable that a man who had preserved the lives of so many people should himself be massacred."

Pare died in Paris, December 20, 1590, full of age and honors.

TREATMENT OF ANGINA PECTORIS.

During a paroxysm the first remedies to employ are such as will dilate the arterioles. Nitrite of amyl is the best because it acts with the greatest repidity. A "pearl" of this drug may be crushed in a handkerchief or in cotton placed in the bottom of a glass tumbler, and inhaled. Nitroglycerine may be injected subcutaneously (1-100 to 1-50 grain), or a tablet of this substance may be masticated. It is readily absorbed from the mouth and acts almost as quickly as when given hypodermically.

Relief by these means is often immediate; but if not, ether should be inhaled. Chloroform is also advised by excellent authorities. Flint thinks it not without danger, if the heart is weak; ether, on the other hand, is a stimulant. Morphine, subcutaneously, is a valuable and some times an indespensable remedy. Whittaker suggests that is be given with caution in a condition which may anyway terminate in sudden death. The morphine (½ grain) may be guarded by atropin 1-150 grain), and in case of alarm also by strychnine (1-30 to 1-20 grain). Electricity has also been recommended.

Hot and stimulating applications over the praecordia, such as a strong mustard poultice, are appropriate, as are also heat and friction for the extremities. Sometimes an icebag is put over the heart. Alcohol and aromatic spirit of ammonia are of benefit in case the cardiac action is feeble. Syncope demands such drugs as digitaline, digitalis, saffeine, strychnine, and camphor, employed hypodermically. I have known oxygen to contribute to a favorable result in collopse due to chronic myocarditis with dilatation of the left ventricle, and cannot see why it might not be well for a subject of angina pectoris to keep some ready in his house.

Between attacks, it is of vital importance to avoid the predisposing and exciting causes. Rest and moderation are demanded. As for drugs, nitro-glycerine, taken after meals in doses just short of causing headache, has a distinct inhibitory effect upon the paroxysms. In some instances it might be better to order it every three hours, as its influence is not long continued. Nitrite of sodium (2 to 5 grains) may replace nitroglycerine.

A new remedy is erythrol-tetranitrate in grain doses four times in the twenty-four hours. If this drug is given in spirit and water (1 grain in 1 drachm of alcohol and 7 drachms of water) the tension begins to fall in two or three minutes; if given in a pill, the time is twenty to forty minutes; if given in tabloid form and chewed, the time lies somewhere between the two. The drug was not introduced to replace amynitrite and nitro-glycerine in cutting short attacks, but only to replace them in preventing the onset of the attacks. J. B. Bradbury thinks the tablet undoubtedly the best form of administration.

The persistent use of potassia iodide is very effective. Ten or 15 grains may be given thrice daily before meals in half a glass of water; or 20 grains three times a day for twenty days, followed by nitro-glycerine for ten days. The iodide is believed to dilate the arterioles and to promote arterial nutrition. See supposed that also by enlarging the calibre of the coronary arteries it invigorated the myocardium.

Arsenic in small doses also tends to avert the paroxysms. In case of fatty degenration of the heart it would be contra-indicated.

Quinine and methylene-blue have also been recommended.

The treatment by saline baths and by the Schott method of excerises has a most potent effect in improving the condition of the cardiac

muscle and vessels, and appears to have a direct effect in making the attacks less numerous and severe, and even in causing them to cease during a period of months or years. The movements must be made with especial care and caution in these cases, and the resistance at the onset must be at a minimum. The artificial saline baths should contain from 1 to 3 per cent. of salt, and from ¼ to 1 per cent. of chloride of calcium, and should gradually be strengthened by the addition of carbonic acid.

Sajous' Annual and Enc'y, Vol. 1, p. 347.

FOREIGN BODY IN THE EAR.

Dr. R. Haug (Deutche Med. Wochenschrift, Feb. 3rd, 1898) reports a case which should impress upon the minds of all, that with few exceptions the easiest, safest and best method for removing a foreign body from the ear is by syringing warm water into the external canal, and that the dangerous practice of trying to remove it with forceps or hooks should be avoided if possible. The case was sent to Haug on the ninth day. He found the auditory canal highly inflamed, the auricle and surrounding parts swollen, and the cutis of the osseous part of the canal torn out by the manipulations of an unskillful surgeon, so that the periosteum was exposed. The foreign body, a bean, could not be seen, but by means of a probe passed through the swollen and closed canal could be felt firmly embedded. As pain in the ear and mastoid increased, and headache, vertigo, neausea, and fever set in, and as it was not possible to remove the bean through the narrowed meatus, the auricle was detached behind and thrown forward. It was then found that the bean had been pushed through the membrani tympani into the middle ear, where it was found swollen by the constant bath of pus in which it lay, and firmly wedged in the drum cavity, from which it was removed only after chiselling off a portion of the osseous canal. Entire recovery in about two months.

THE MORTALITY STATISTICS OF HAVANA.

Toward the close of December, Sanitary Inspector W. F. Brunner, of the Marine-Hospital Service, rendered to Major-General Francis V. Greene, then in command in Havana, a tabulated report of the mortality of the city for the period embraced between the 1st of January and the 22d of December, 1898. By the courtesy of General Greene we have been enabled to examine Dr. Brunner's report. The table shows 19,271 deaths from all causes. The population of Havana is about 200,000, so that the total number of deaths makes a mortality rate of nearly ten per cent. In round numbers, this is five times as high as the rate for the city of New York, and that, too, for a year in which there were fewer than the usual number of deaths from yellow fever. The figures are as follows: Yellow fever, 136; typhoid fever, 1,030; pernicious fever, 529; malarial fever, 1,373; dysentery, 1,359; enteritis, 3,149; diphtheria, 21; small-pox, 186; beri-beri, 9; glanders, 8; starvation, 215; pneumonia, 317; tuberculosis, 2,819.

The decrease in the number of deaths from yellow fever is accounted for by Dr. Brunner by the fact that during the year 1898 but few Spanish troops were brought to Cuba. Beginning in April, 1896, he says, an epidemic of small-pox swept Havana, and by the close of the year 1897 it had caused nearly 2,500 deaths, almost exclusively among the natives. Practically, he adds, small-pox has now disappeared from Havana, but is still epidemic in several parts of Cuba.

"The enormous death-rate from tuberculosis," says Dr. Brunner, "is a result of bad hygienic surroundings, meaning bad food, bad homes and bad morals." The great number of deaths from dysentery and enteritis he attributes to a scant and bad food supply. With 215 deaths attributed to starvation alone, the conclusion can hardly be avoided that insufficient and unwholesome food played no inconsiderable part in the mortality from other disease than dysentery and enteritis. It becomes more and more evident that we have a tremendous duty to perform in Havana in the way of sanitation. It is to be hoped that the government will take the matter in hand promptly and push the work forward with all the speed that may be compatible with thoroughness.—New York Medical Journal.

THE PATHOGENIC ROLE OF DUST.

Kelsch and Simonin call attention to the disease-producing properties of the dust of streets and human habitations, and cite the cases of two soldiers who, in consequence of a wound on the foot, developed tuberculous lymphangitis, followed by general tuberculosis. Both were strong men without family-taint. The authors refer to two circumscribed outbreaks of typhoid fever manifestly arising from contamination of the dust of the floor. They then describe the technic of bacteriologic analysis of dust. From the dust on the floor of one hospital they were able to isolate staphylococcus pyogenes albus and aureus, bacillus procyaneus, the pneumobaccillus of Friedlander, and the bacillus coli communis.—Am. Year Book of Med. and Surg.

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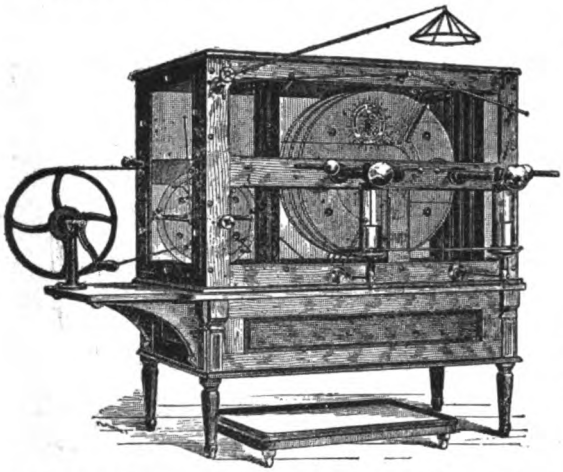

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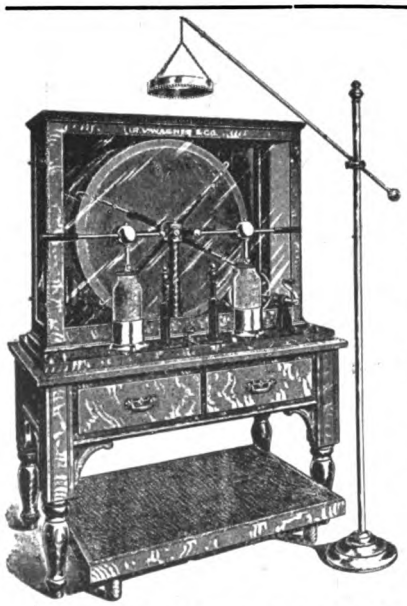

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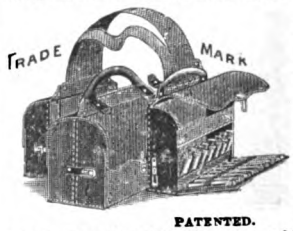

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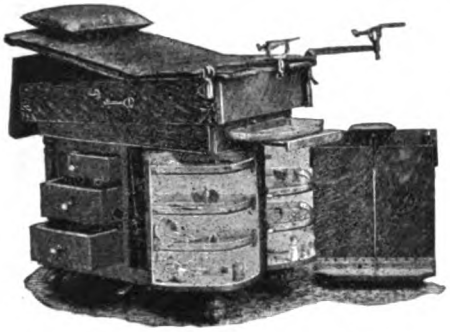

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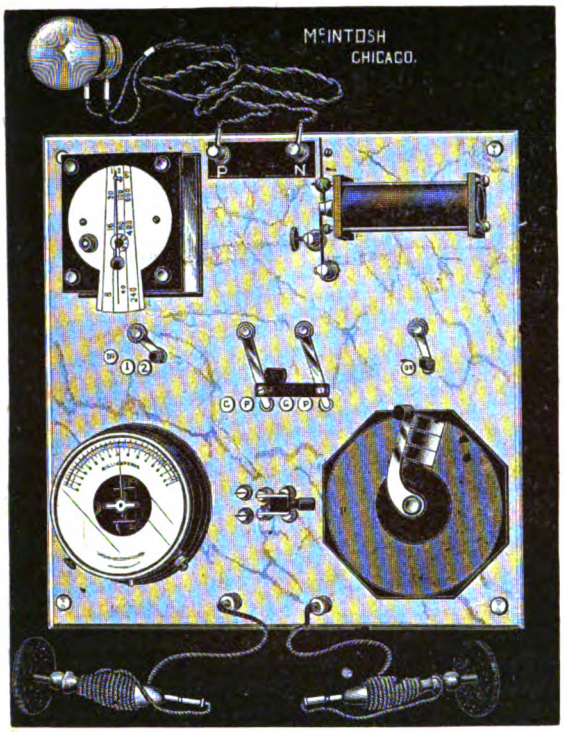

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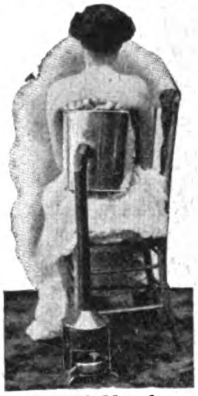

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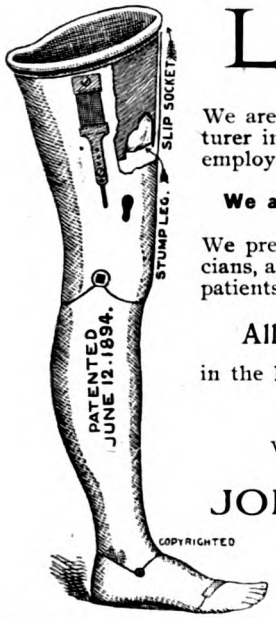

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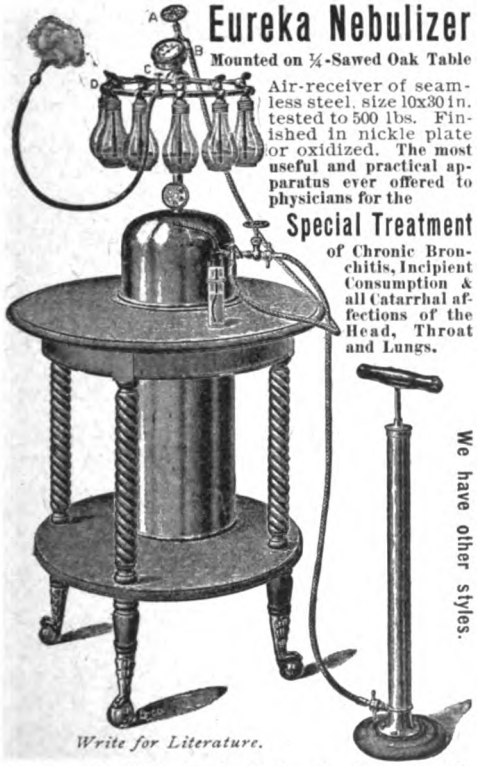

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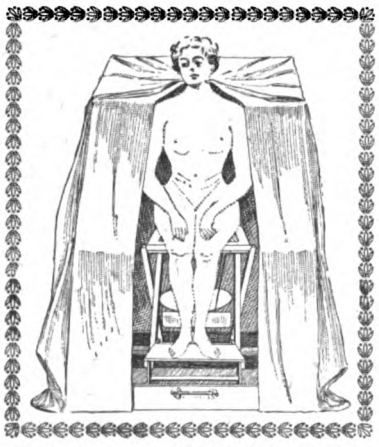

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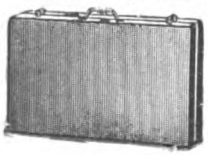

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Original Articles.

PARANOIA.

Notes from a Lecture before the Senior Medical Class of Hamline University.

By C. K. BARTLETT, M. D.,
Professor of Psychological Medicine.

Paranoia, the subject of the lecture today, is the modern term for "monomania" of the earlier writers, or the "reasoning madness" so-called, sometimes, because the reasoning powers do not appear disordered; and on this account it is safe to state that more persons have been judicially condemned and punished for crimes for which they were really innocent by reason of mental irresponsibility, a great many more than have been cleared, when really guilty, by the legal acumen of their counsel, or on the plea of "Mania Transitoria."

On no other form of mental disease are experts in psychology so liable to differ in their opinions as to the responsibility for crimes committed as in that of paranoia; and certainly no other form has given the lawyers so much latitude for argument, or vexed the courts with so great difficulties; and no other has led to so much confusion in legal decisions. It is not so great a cause for wonder at these differences when we consider the conditions of the persons suffering from this form of mental disease. The subject may be in his usual state of general health, and doing business with his customary sagacity, or working at his trade with others, treating his customers or his associates in his ordinary manner, and in no way attracting the attention of strangers, or those casually meeting him; while at the same time, and under the cover of all this apparent rational conduct, he may entertain some delusion, and so hold it for months and even years before it becomes known to the public. While doing business away from home he may seem perfectly rational, and in no way create suspicion of his real condition; but at home, and among his own family, he is very apt to show some symptoms of his malady, and will not always be able to control his feelings and conceal his peculiar mental obliquities; in fact at home is usually where he or she makes the most trouble; it is here that suspicion on the part of husband or wife begins, and misunderstandings and wranglings continue without, perhaps, any real grounds for complaint, neither party knowing just what the causes for the difficulties are.

With this state of things in a family, if it is the husband having the delusion, he is inclined to leave home without apparent cause or necessity, and seek work or business in different places; he may return occasionally, and seem all right for a time; but the propensity to rove about will continue, and rather increase; he will make shorter stops with his family, and in any one place, and if an unmarried man, he will become more and more indifferent towards his associates; he will take less and less interest in work, and become careless as to the wants of his family if he has one, and perhaps cease to make any provision for its support; and at the same time he may not have any bad habits upon which to squander his funds, or what he may occasionally earn.

But the disease grows worse, and the delusion more prominent, and sooner or later is liable to end in some violent outbreak, or assault on some one whom he may believe the cause of his troubles.

If it is the wife who is afflicted with this form of disease, although she may conceal her delusions for a while, they are liable to find expression, usually in accusations against her husband or some neighbor, which will gain credence until the nature of her real infirmity is fully understood.

Paranoia is, therefore, that form of insanity that has some conspicuous idea or delusion which dominates the mental faculties and controls the persons' actions to a greater or lesser extent. In Greek the word means foolishness, silliness, or madness; in English the meaning is well expressed by the term "crankiness;" and, although we may not be prepared or justified in calling all cranks crazy, still, as a class, they furnish many individual cases, if not themselves in their descendants, for our hospitals for insane. The disease may therefore be defined as a chronic form of insanity, either acquired or inherited from a neuro-degenerative taint, characterized by fixed delusions, and usually of persecution. It differs from other forms of mental disease by not generally terminating in recovery, incoherence, or dementia, at least for a long time, the patient retaining for years the ability to think and speak logically.

The symptoms of paranoia differ entirely from those of our previous subject—paresis; in that form, so far as the patient himself is concerned, he never makes the slightest attempt to conceal his feelings or thoughts; he talks openly and at all times, expressing every thought apparently as it comes into his mind; but with the paranoiac it is just the opposite; he talks very little, and seldom exposes his "inner consciousness" as we may term it, especially in the earlier stages of the disease, even to his intimate friends; but later on he will give indications of his thoughts occasionally.

When these cases have arrived at that point in their mental condition their friends cannot bear with their abuse and accusations, perhaps threats of violence any longer, and have them committed to the hospital as insane, then follows the excitement of the relatives and acquaintances who believe the commitment unnecessary and cruel, and they will show with apparent triumph the well written, and coherently expressed letters of the patient, explaining all his or her conduct and with great ingenuity and plausibility, and accusing those concerned in their commitment as being conspirators to gain some advantage of property, or to, in some way, further their own schemes to injure or punish them; they will write long letters to their acquaintances, casual perhaps, to the newspapers, to the governor and other state officials, and to lawyers, seeking their aid in obtaining their release from the hospital, exaggerating their confinement as to the great hardships to which they are exposed, and the cruelty of being deprived of their liberty, and the abuse to which they are subjected from brutal nurses, etc., etc.

To ordinary readers these letters will appear perfectly sane and proper, and to their minds seem to be such cases as should be investigated by the authorities. Committees will be appointed who will personally examine the patient without discovering any delusion, perhaps, unless instructed and guided by some one familiar with the disease and the patient, and the committees may recommend the discharge of the persons, only to return home or elsewhere to continue their usual course of irritation among those with whom they are associated.

These letters, as I have mentioned, that appear to ordinary readers so clear and truthful, to one accustomed to peruse the correspondence of insane persons will appear in a very different light; in them the expert in mental diseases will see an undercurrent of abnormal thought, easy enough to understand but difficult to explain, even if he is not acquainted with the writer; he will discover this in the composition and the arrangement of ideas.

Paranoiacs are prone to be in trouble and become involved in lawsuits, and the Germans have a special name for these subjects—meaning "Insanity with a tendency to litigation." They are inclined to be quarrelsome and obstinate, impatient of contradiction, and in the advanced stages of the disease, to interfere with the affairs of others through jealousy, or their delusions of conspiracy and persecution.

Krafft-Ebing says, "These patients are defective in their ethical qualities; their alleged possession of a sense of right, which they emphasize on all occasions, is in reality reducible to a tremendous egotism which allows them to recognize in law only a means to their personal ends." And Spitzka says, "They will buy law books, and even become well versed in the details of that science; they will haunt the courts, and if defeated in one will appeal to another, and if finally beaten, will become infuriated at their failures, and convinced that the judges are bribed, or are under the advice of secret societies, and they will resort to invectives and libels, and send lengthy documents to the press, or even make personal assaults on their supposed opponents and their agents."

Guiteau was a typical example of a crank, and in my opinion a paranoiac. Although the world can well spare such a man, still his trial

is thought by many to have been not only a mistake, but his conduct on the scaffold at the time of his execution a disgrace to our courts and the country. He should have been legally restrained long before he made the deadly assault on President Garfield; his father was undoubtedly insane, and early in life the son exhibited unmistakable signs of inheriting a neurotic degeneration; he was excessively egotistical, and always attempting to do something for which he had made no sufficient preparation, and always failing in everything he undertook, except in his effort on the life of the president. This case will be referred to again.

Pendergast, who shot Mayor Harrison, of Chicago, was also a paranoiac, and should have been confined long before he killed the mayor. He was well known to be insane on the single subject of office, but his acquaintances considered him harmless; they trusted him too long.

It is proper to make some distinction between the harmless and the dangerous delusions of individuals, although it may be impossible to always know when a man with any delusion and appearing harmless, how long he may so continue; but we know that many persons holding some kind of delusions go through life, doing their work well, and without attracting particular and public attention on account of their abnormal mental condition. There was an example of this in the case of a prominent judge in this country, who held court, and, so far as his legal opinions and decisions were concerned, was considered competent and reliable, but all the time cherished the delusion that his dead wife returned to him frequently and sat by his side in the evening and conversed with him.

Dr. Clouston, superintendent of the Morningside hospital, near Edinburgh, Scotland, speaks of the celebrated case of Mr. Wild, who held an important government office and did his work well all his life, and yet had labored under the delusion of grandeur, believing that he was a son of George the Fourth, and left all his money to the town of Brighton, because that monarch had been fond of that place; he was held to be insane as to his will-making but sane as to all his other actions; and the doctor adds that he knows "many Scotland lawyers, doctors, clergymen, business men, and workmen, who labor under undoubted delusional insanity, and yet do their work about as well as if they had been quite sane, though they are not such pleasant people as they would have been if sane, especially among their relatives."

Krafft-Ebing has described paranoia under two forms, viz.: First, when delusions of persecution are prominent; and second, when there are delusions of exaltation, especially as to religious matters and erotic fancies. Under the first division he would group those cases that are reserved in their habits, and naturally of a suspicious disposition which increases by constant self-introspection. With these persons harmless remarks, casual meetings, and strange looks are interpreted by them as intended for their annoyance or disgrace. Ordinary and natural sounds are given personal application, as a patient once said to me that the creaking of a rocking chair, as it moved to and fro, called him by name and said, "fool, fool, fool," and the whistle of a passing engine on the railroad paid him some equally disparaging compliment. Under these circumstances and such delusions they become shy, irritable, and depressed, and withdraw from society.

The deception of all the senses is common, and Dr. Henry M. Hurd, in a paper on this subject some years ago, remarkable for its accuracy and clearness of statement, said, "Voices are heard far and near, conscious thoughts are transformed into hallucinations of hearing and sight; there are false interpretations of sensations; the food tastes of arsenic, chloroform, and dirt; everything smells putrid, or like burnt feathers."

One patient, I remember was always complaining of what he called "smudging;" the bad odor he thought came down the chimney, and up through the hot air register, and in through the window; the latter he boarded up, and covered the chimney and the register. During this stage of the disease the patient usually attempts to avoid trouble, and will be comparatively harmless; he will change his place of residence, perhaps cook his own food, etc. But finding all these operations of no avail he will conclude he must act in self-defense, and then he becomes dangerous; having fixed the cause of all his troubles on some one, perhaps a total stranger to him, as the person who is persecuting him, he is liable to assault him with fatal consequences.

In the second form mentioned, we have, first the religious paranoiacs who are frequently weak-minded by nature, and are excited by glowing descriptions of heaven or hell, and they imagine they see visions, and have enthusiastic im-

pulses to preach, or to devote their lives to religious work; they are generally inclined to indolence as to business affairs, but read the Bible much and neglect social duties. The mental condition, in these cases, may be aggravated by acute disease and unfortunate love affairs, and it is frequently attended by sleeplessness. In their periods of ecstacy, which alternate sometimes with depression, they attempt to become reformers, and sooner or later are committed to our asylums to annoy the officers and nurses, and disturb the comfort of the other inmates of the institution. Under this form we also have the erotic paranoiac, the essential feature of which is that the person is in love with some one of his or her own sex; or if with one of the opposite, it is usually some one in a higher class in society.

The sufferers of this form of disease dream and elaborate their fancies until some object appears to fix their romantic attentions upon, endowing the persons with all the charms of their recollections gathered by reading, and the "images from dreams." Their ideals may be perfect strangers; but they adore just the same, and interpret looks or attitudes as encouragement to their desires, until some overt act is committed in consequence of their delusions, and they are committed to the hospital as insane; but in some instances this duty is delayed too long, as in the case of Alice Mitchell in Tennessee, who killed her friend, for whom she had formed such an insane attachment as to assert that she should marry her; she was acquited of murder on the ground of "perverted sexual feelings," and the medical experts were unanimous as to her mental unsoundness.

Paranoia differs from acute mania by the absence of excitement, or loss of self-control in its earlier stages. The patient is restless and troubled because he is disturbed by some phenomena which he does not understand and cannot explain to himself. The morbid impressions may not be constant at first; but they return and continue to weigh upon his mind until the delusions become permanent. It differs from chronic mania as that is the result of other forms of mania, and from melancholia by the different relations of the patient to the outside world; the melancholic patient believing himself justly despised and meriting abuse, while the paranoiac thinks he is right and all the world is wrong and persecuting him without cause; he is the saint, all others are sinners. It also differs from dementia in the fact that the mental powers do not fail, at least, for some years; he can converse coherently, reason correctly, and engage in occupations requiring a good degree of mental capacity. Like all forms of brain disease it will eventually terminate in enfeeblement of the intellect.

The most dangerous cases suffering from delusional insanity are those who do not attribute their annoyances to unnatural, unseen, or impossible means, but to the ill will of real persons, who are, they imagine, conspiring against them with evil intent, or are unfaithful in their marriage vows, etc.; and they become still more dangerous if they are inclined to obey the dictates of voices directing them to commit certain deeds. In obedience to such imaginary commands monomaniacs have committed homicide, self-mutilation and suicide.

As to the causes of paranoia, in addition to what has been mentioned as to its origin in a hereditary diathesis, it may remain as a permanent brain result and damage after acute attacks of other diseases; it may follow alcoholic and syphilitic poisoning; also from traumatic injuries, sunstroke, or from any gross lesions, embolisms; and from perverted sensations caused by contitutional or local organic diseases.

A striking example of a change of disposition following a traumatic injury to the brain was afforded by the case of Phineas P. Gage, a young man, twenty-five years of age, who had the iron crow-bar shot through his head, recovering from the wound, but never recovering his previous mental soundness. Before the accident he was a quiet, sober, and competent young man; but after the injury, he was fitful, irreverent, profane (not so before), impatient of restraint, inclined to rove about, obstinate, yet capricious and vacillating, always changing his plans for future operation; in fact his mind was radically changed by the brain injury. He lived twelve years after the accident, dying in California in a fit of epilepsy.

POST-MORTEM APPEARANCES.

As to the condition of the brain in these cases after death very little can be said, as the opportunity to examine the brains of those dying in its earlier stages does not occur except in those instances when they have been executed as criminals, and later on other diseases may complicate appearances. The brain of Guiteau was ex-

amined, and its condition reported by Dr. Godding, superintendent of the government hospital for insane soldiers at Washington, in his book, the title of which is "Two Hard Cases." I have not the book at hand and cannot therefore give the full notes of the autopsy; but I can state from memory that his brain was not considered in a normal condition. Whether the changes noted were the result of his irregular life, and would account for any of his actions, must be left to conjecture. I hoped to find the full notes of the post-mortem reported in the Journal of Insanity, as the editor in chief was the leading witness for the prosecution; but I only found a review of Dr. Godding's book from which is quoted the last few lines concerning the closing scene of Guiteau's life in which he says, "With a firm step and an upturned eye he went away; and while the notes of a weird chant lingered in the air, with a paraphrase of the prayer-of-prayers on his lips, and the exultant yell of the mob rising without, he took the appeal beyond their voices. Perhaps not in vain, for that mind which saw through a veil comprehended not; even as that brain acted through clouded membranes."

TREATMENT.

Not much can be said as to the medical treatment of these cases. At the beginning, and before the delusions are firmly fixed, something may be done by change of scenery, occupation, agreeable associates and such surroundings as will tend to divert the mind from morbid impulses, and give it new channels of contemplation; the shy and acutely sensitive should be encouraged to mingle with congenial companions, and cheerful family life can do much to remove commencing delusions of suspicion. Circumstances and objects having a tendency to create wrong impressions should be explained and removed. The general health should be carefully preserved, and any constitutional disease corrected, if possible, and the whole nervous system brought to the highest tone. The cultivation of the intellect, in those of quick and keen perception, should not be encouraged in the young at the expense of the physical growth and strength. These are prophylactic measures rather than curative; after the delusions are firmly fixed, and they have assumed any of the dangerous forms described, the best place for such subjects is in some hospital for safe keeping, and for the peace and comfort of relatives.

*UTERINE DISPLACEMENTS.

By A. E. BENJAMIN, M. D., Minneapolis.

The normal position of the uterus, in the upright posture, is horizontal, anteverted and slightly anteflexed upon the bladder, the os looking down and backward against the posterior vaginal wall. Its position is maintained by the utero sacral ligament, pelvic fascia, lateral ligaments, its own weight and the intra abdominal pressure. The utero vesical, round ligaments, perineal body, muscles forming the floor of the pelvis and muscular bands, viz.: Utero inguinal, utero ovarian, utero pelvic and utero sacral are auxilliary supports. The pelvic fascia and the perineum act as counter forces to the intra-abdominal pressure. "There is but one point of attachment where the uterus is at all firmly fixed, viz.: The posterior ligaments, being attached where the organ is thinnest, the neck, it is likened unto a pyramid balanced upon the point, a paradoxical condition which does not exist in the lower animals, but is an anomaly in the animal kingdom explained by the upright position of the human species." The utero vesical ligaments in front pass one from either side of the cervix to the bladder forming the vesico uterine pouch. The posterior or recto-uterine ligaments are folds of peritoneum passing from the cervix and are continuous with the second portion of covering of the rectum forming Douglas' pouch. Between these folds on either side run muscular fibers termed the utero sacral ligaments, important structures, acting as a tonic force upon the cervix.

Laterally the broad ligaments formed by folds of peritoneum and containing the ovaries, tubes, round ligaments, vessels, nerves and muscular fibers, are attached to the floor and sides of the pelvis. They steady the uterus laterally.

The round ligaments, passing from the sides of the body of the uterus between the folds of the broad ligaments, through the inguinal canal to the labia majora, are important in that they act as guy ropes to swing the uterus back into place, when temporarily backwardly displaced. When too long or lax, they may allow a permanent retro-displacement of the organ. When the bladder is full, the uterus is pushed up and back decreasing the amount of anteflexion. When the rectum is full, it is pushed forward. In defecation and urination the organ is pushed down, and during each respiration it see-saws back and

*Read before the Medical Club of Minneapolis, Feb. 16, 1899.

forth in the pelvis. Thus we see the uterine body floats, as it were, suspended in the midst of the organs of the pelvis, which act as cushions for it.

Considering the extensive changes of the volume, form, and consistency which the uterus undergoes at each pregnancy, the alterations and lesions which may be produced at each parturition on the adjacent organs, ligaments, muscles, and serous membrane, the effects of inflammations of all sorts, results of improper dress and occupation, and the influence of various motions upon the equilibrium—so unstable, we are surprised that displacements are not more frequent.

It is a well-known fact that a displacement alone does not always constitute a disease, but is a factor in the perpetuation or aggravation of a diseased state of the uterus or adnexa which may accompany it, or supervene. In displacement the circulation is interfered with, venous congestion occurs, thereby favoring the continuation of inflammatory troubles in and around the organ.

The various forms of uterine displacements are as follows:

Ante-version.
Ante-flexion.
Retro-version.
Retro-flexion.
Lateral version.
Lateral flexion.
Ante-position.
Retro-position.
Lateral position.
Prolapsus.
Elevation.
Inversion.

There may be a modification of any one of these, together with some inflammatory trouble. In fact as has already been stated, it is often the result of inflammation which causes the woman to seek the advise of a physician.

In ante-version the uterine body is back of the symphysis and the os is directed backward against the posterior vaginal wall. I believe this abnormal position usually occurs when an inflammation has existed, a perimetritis with adhesions, which fixes the uterus forward, or a post uterine inflammation shortening the utero sacral ligaments. There is then an irritation of the bladder and tenesmus is experienced. Sterility, dysmenorrhœa, metrorrhagia, and leucorrhœa are often present.

The treatment of this form of displacement should be, when demanded, as in all other forms, hygienic, constitutional, and local; proper food, exercise, and clothing, out-door air, tonics. etc. In simple cases not adherent the Thomas pessary, or the ring to immobilize the cervix is worn with comfort. When inflammation exists, rest, hot douches, and tampons of ichthyol or boroglyceride are used with beneficial result. Should the uterus remain ante-verted, with bimanual manipulations, the repositor, or sound, replacement is often accomplished. A dilatation and curetting are demanded when an endometritis and a stenosis of the os are present. In relaxed conditions of the ligaments an abdominal support is needed.

Ante-flexion is congenital or acquired and is the exaggerated normal curvature of the uterus forward. The uterine body is bent downward, or the cervix upward, or a combined cervico-corporeal flexion is present. Any adhesions around the uterus, over flexed forward, maintain this position.

In the congenital variety there are in some cases periods of menstruation several months apart with dysmenoerhœa and clotted flow. The treatment, besides what in a general way has been previously mentioned, should be to relieve the endometritis, dysmenorrhœa and sterility. When the uterus is movable and not inflamed, a pessary may be worn. The operation devised by Schroeder—a biconical amputation of the os is perhaps the most successful; this causes a rapid involution of the hypertrophied body. The displacement may correct itself in time thereafter. The operation should be supplemented by a curettage. At times a dilatation, curetting, and putting in a glass stem effect the desired result; if not a repetition often does, or, after this operation, the insertion of Outer-bridges cervical speculum may result in pregnancy, accomplishing more than we gain by very radical measures.

With the repositor, sound, massage, and posture the uterus has often been replaced. Severing the contracted utero-sacral ligaments through the vagina has resulted in much good.

Retro-displacements of the uterus are the most important and common of all varieties, and cause the greatest trouble. Sanger, out of 700 gynecological cases found it in 15.14 per cent., or 108 cases. Winekel obtained 19.10 per cent. Lohlein, 18 per cent.

For economy of time and space, retroversion and retro-flexion shall be considered together, as the cause, symptoms, pathology, and treatment are nearly the same. In these forms of displace-

ments prolapse is a frequent complication from a heavy uterus, a relaxation and stretching of the round ligaments, pelvic fascia, or sacral ligaments, in addition the intra-abdominal pressure now acting as a force driving the uterus further downward.

Congenital retro-displacements are rare; they are usually acquired. Owing to a relaxed condition of the ligaments after parturition or too long dorsal decubitus following, the uterus, being engorged, falls backward and occasionally owing to retained placental structure or an endometritis, it has a tendency to remain in that position. It is not infrequent to find in girls or unmarried women, especially of the working class, a retroflexed uterus, an endometritis, hypertrophy of the fundus, some prolapse, and even a fibroid. Should a pelvic peritonitis from gonorrhœal or other infection occur the uterus remains fixed by adhesions. Straining, continual hard labor or falls may bring on an acute displacement. Add to any of the above causes the habit of tight-lacing and lack of attention to the bowels, a continual congestion of the pelvic organs is present and permanent trouble, no different than might be expected, results.

The symptoms of rectodisplacement are varied and numerous, ranging from the purely imaginary to actual invalidism.

The reflex nervous phenomena are the most pronounced so far distant and seemingly unconnected with the pelvic organs that the true cause is often overlooked. Too often does this happen in girls where the family physician treats the symptoms of dyspepsia, constipation, headache, backache, dysmenorrhoa, cough, paraplegia, muscular fatigue, neuralgias, hysteria, chorea, asthma, hysterio-epilepsy, vomiting, etc., as purely pathological states and conditions in themselves, neglecting to determine the source of the trouble, either because of ignorance of relation of cause and effect, or for various other reasons, modesty of the patient being the principal one. Many of the above reflex troubles have been noticed in various cases by the writer. All the symptoms disappearing when the displacement and associated lesions were corrected.

On the other hand I am thoroughly convinced that in many neurotic patients these symptoms are not produced by a displacement alone, and, in fact, may have nothing to do with it, and that it is wrong to continue a local treatment in such cases too long as it is suggestive of much trouble, and produces a train of symptoms equally as severe but purely psychological.

The common symptoms of retro-displacements are backache, dysmenorrhœa, leucorrhœa metrorhagia, dysuria, constipation, a feeling of weight in the pelvis and at times sterility. The treatment differs according to the knowledge and experience of the medical attendant, some being content in advising local treatment and a pessary in all cases, without a consideration of the pathological conditions present; others advise a surgical operation at once, and others more conservative will remove all inflammatory trouble possible and proceed with surgical means later. It is the last class of practitioners named, I believe, who get the most satisfactory results. The tissues then have reached nearer the normal condition and the result of any operative proceedure can be more accurately estimated. The same general rules in the way of treatment apply equally as well in retro-displacements, including the use of the pessary for moveable non-inflammed uteri in young unmarried women for a time perhaps, when the symptoms may disappear, a later marriage and subsequent pregnancy causing the removal of any trouble remaining. Uteri that become wedged down in the sacral fossa and retained by slight adhesions can be replaced by placing the patient in the genu-pectoral position, by the repositor, Sims' method of introduction of air pressure, bimanual operations, or according to Kelley's treatment of traction on the cervix and bimanual manipulations. Often, however, it is necessary in order to bring about a cure to resort to Alexander's operation or ventro suspension. It is important to consider the selection of the ideal operation for each case.

A woman having had tubal and ovarian trouble with a possible involvement of the appendix, in which there is a retro-displaced adherent uterus, ovary and tube included in the adhesions and especially where pregnancy is not liable to follow soon, a ventro suspension will bring the best results as it gives the operator a better chance to inspect all the contents of the abdomen, to break up adhesions and remove all tissue of no further use in the human economy.

In suspending the uterus two heavy cat gut sutures are passed through the recti muscles, peritoneum and uterine fundus, one a little below the first, and through that portion of the fundus which comes in contact with the peritoneum only; thus a third ligament is formed suspend-

ing the uterus. A relapse seldom occurs. This operation has been supplemented by passing a dissected strip of peritoneum from the parietes and passed beneath peritoneum of fundus, producing a ligament of peritoneum.

After oophorectomy a ventro fixation gives better support and is more permanent; pregnancy does take place after ventro suspension, the woman going to full term with a normal delivery often, but where the ventro fixation is made abortion frequently takes place or difficult labor is experienced. I need not mention that it is always necessary in troublesome displacements to repair a lacerated cervix or perineum, and when there is an endometritis, to curette. These operations alone are frequently followed by replacement.

Alexander's operation is an ideal one for a retro displacement as it fixes the uterus by normal supports in a normal position. There are a number of prominent gynecologists who do not recommend this operation. Many failures occur because of the cases wrongly selected or on account of faulty technique. The ligaments are occasionally not found by the inexperienced surgeon, they are not shortened enough, or poorly anchored. While the operation has been employed in nearly every case of retro displacement by some operators, it is the opinion of the writer that it is applicable mainly in movable uteri, or where adhesions are only slight and easily broken up, and in women who are apt to become pregnant soon. A few operators open the posterior vagina and break up any remaining adhesions, pack with gauze and do an Alexander, Edebohls, Kelsey, Dudley, Martin, McLaren and others, each have a special way of performing the operation but the method of Dr. Abbott, which has given satisfaction in every case of the writer's, being simple and safe, is employed, excepting that but one needle is used on a single thread. After the ligaments have each been liberated, the uterus is held up in place by a pessary, four to six silk worm gut sutures are introduced through the skin, muscle, ligament and fascia, an extra one pulls doubled up ligament into monsveneris coming out through skin and is tied. Thus we only have one row of sutures to consider; a wet antiseptic dressing will relieve any early stitch abscesses. Drainage may be employed if much hemorrhage occurs. I have had no hernia, prolonged stitch abscesses nor relapses.

The inspection and treatment of the adnexa and appendix may be partially made by opening peritoneal cavity at seat of operation, at the time, but this is not very satisfactory. Many other operations have been devised for retaining uterus in place, as vaginal hysteropexy. Wylie shortens ligaments through the abdominal incision by folding them up and stitching them together. Goff and Bodes shorten the ligaments through the vagina. Polk ties the ligaments together by sutures after opening the abdomen.

Lateral version or flexion may be congenital or due to some inflammatory mass in the pelvis or tumors in the broad ligament. Local treatment for inflammation or removal of the mass or tumor may be necessary for that condition alone, as simple lateral displacements cause but little trouble. Retro or antero position is likewise due to some pelvic inflammation or a tumor in the cul-de-sac or anterior to the uterus. This displacement has also been found to be congenital at times. A similar treatment as in lateral displacement should be inaugurated.

Prolapse of the uterus may be acute or chronic. It occurs in the nullipara or multipara. The acute is brought about by a sudden strain or fall. Preceding this there is often a retrodisplacement or a metritis. The ligaments have become weakened and the intra abdominal pressure drives the organ like a wedge down into the pelvis. The chronic variety is seen in women who have borne children, in which there is a perceptable tear of the levator and transverse perinei muscles, the vulva gaping, admitting air into the vagina, separating its walls and allowing descent to occur more readily, especially where the uterus is heavy from a tumor or subinvolution. A subcutaneous tear of muscles, not perceptable from the outside is often present which permits of descent equally as great.

The chronic form is also seen in girls who have worked hard, have an endometritis, and other displacements. The os is often conical and elongated. In prolapse there must necessarily be a pulling down of the anterior and posterior walls of the vagina as well, producing a cystocele and rectocele which are in proportion to the amount of support from below and force from above and degree of prolapse of the uterus.

The treatment should be to remove all ætiological factors present, such as inflammation, or tumor, tight clothing, etc. All muscular tears of the cervix and perineum should be repaired

or an amputation of cervix to permit of greater involution of the uterus if necessary. When the cystocele is large a special operation may be needed to remove redundant vaginal tissue in front, and thereby narrow the canal, a similar operation may be needed on the posterior vaginal wall in extreme cases.

Should a retroversion or flexion exist a proper operation, such as Alexander's or ventro suspension, with repair of lacerations, will correct all trouble in most cases. The disk pessary is often suitable in old people, or the spherical glass one. In certain cases a vaginal hysterectomy can be easily performed, especially in women past the menopause, when there is an inability to retain a support or the case is an aggravated one. Elevation of the uterus occurs when a tumor below pushes the uterus up, or on account of pregnancy, and at times because of cicatricial bands drawing the uterus upwards.

Inversion, while rare, should be considered, it occurs at times when too much traction is made on the cord in adherent placental cases. A polypus attached to the fundus may drag it down. Extensive lacerations of the cervix, when the uterus is soft and flabby, may permit of an inversion, especially where there is a tumor of the fundus.

The treatment in acute cases is to replace the fundus, repair any tear, or remove tumors causing it. In chronic cases the fundus may be forced back by proper manipulations, the patient being anæsthetized, or by using a cup shaped pessary attached to a stem, pressure coming near the base of inverted portion. Replacement is said to often take place in a few days.

NOCTURNAL ENURESIS.

Cognetti de Martiis records successful treatment in a case of nocturnal enuresis by the Fiorani method. The patient was a man who had suffered from childhood. A string was tied to the patient's hand as he lay in bed and attached to a bag containing 50 gm. of dry sand, acting as a weight at the foot of the bed. The first night there was one involuntary unrination, causing the patient to wake. The next night the weight was doubled and the patient awoke before micturition. After a few nights the patient managed without the weight, and has remained free from the disturbance. With Fiorani, Martiis believes that nocturnal incontinence is a psychic disturbance; it is, in fact, somnambulism of the bladder, comparable to ordinary somnambulism and amenable to similar treatment.—Am. Year Book of Med. and Surg.

*THE VALUE OF MAKING URINARY ANALYSES.

By ROBERT A. CAMPBELL, M.' D.

There is no doubt that the basis for intelligent work in medicine lies in anatomy and physiology, the study of structure and function, these sciences of the oxygenating alimentary circulation and excretory systems are of the greatest importance to the general practitioner.

The supply of oxygen and food, the circulation of the blood and the excretion of waste products are essentials of animal life.

Each cell, like the human body as a whole, has food brought to it, uses a portion in its work and throws out the waste and worn out portions, this process constituting the cell metabolism. The total waste product of all cell metabolism amounts to a great deal and consists of many substances. It must be removed from its cell vicinity and from the body, otherwise the cell function ceases and the organism dies.

The waste product consists of gases, liquids and solids, all of which are removed from the cell vicinity by the circulation, and carried to the different channels of elimination, the gases to the lungs, a large amount of liquid to the skin, and the solids mainly to the kidneys.

The portion of the waste product brought to the kidneys for excretion is worthy of close and patient study because there is so much disease which interferes with its removal from the cell vicinity and from the body, giving rise to symptoms which rightly understood and treated, often relieve suffering and prolong life.

The urine is composed of water, salts, pigments and nitrogenous compounds. It amounts to about a quart and a half in 24 hours. The amount of solid matter aggregates about 2 ounces, of this nearly 1 ounce is urea, 12 grains uric acid, 2 drams pigments and extractives, and 6 drams salts. Concerning the 2 drams of coloring matter and extractives very little is known positively; of the 6 drams of salts, about 4 are sodium chloride, 1 phosphates and 1 sulphates, all clinically of some interest.

In Uræmia the cause of the symptoms has at different times been ascribed to uric acid and to urea retained in the blood. At present it is thought that not any one ingredient is the cause, but probably the pigments associated with the nitrogenous waste act as the poisons to the system.

*Read before the Medical Club of Minneapolis, Dec. 15, 1898.

Uric acid is the object of study now as it has been since it was first brought forward as the cause of rheumatism and gout. Dr. Haig of London, has written an interesting book about it the past year, which it can not but be profitable to read, although he may be accused, perhaps, of having made his facts fit his theory. Uric acid elimination varies greatly, in disease running up 1¼ drams in 24 hours. He thinks that about 10 gr. are produced in the body every day by cell metabolism, and that 2 gr. are derived from the food. If these 12 gr. are eliminated as formed, no symptoms arise from uric acid, but when all is not eliminated, a portion every day being retained in the body, stored in the liver and spleen accumulating to cause disease in middle life and old age, when it has become of considerable amount, it overflows into the blood at the times when that fluid is highly alkaline, thus giving excessive quantities in circulation, and producing uric acid symptoms, and entailing increased elimination by the kidneys. The uric acid symptoms are high arterial tension from capillary obstruction, headaches, vertigo, nausea, mental depression, dyspnoea, asthma, bronchitis, anaemia, haemoglobinuria, liver and kidney congestion and Bright's disease. When the blood alkalinity is reduced thus making a poorer solvent for the uric acid, it goes back into storage in the liver, spleen and joints again with the result that tension is relieved by dilatation of the capillaries, symptoms disappear more or less completely, and diaphoresis or diuresis ensues.

An interesting feature of Dr. Haig's theory is in regard to the effects of drugs upon the stored up uric acid, and the effect of diet in this diathesis. Alkalies, salicylic acid, sodium phosphate, quinine and belladonna causing the uric acid to go into solution in the blood, aiding elimination but bringing on the symptoms already mentioned—provided there has been a considerable amount of uric acid previously stored—the opposite effect is had by acids, iron, mercury and other metals, lithia, some sulphates and some chlorides, opium, cocaine, antipyrin, ammonium, nitrites, etc. All these drugs, Dr. Haig believes, diminish the elimination of uric acid and bring about its retention and accumulation in the body; they drive it out of the blood into the tissues. He thinks that one-sixth of the uric acid in the system is derived from the food, those principally containing it being meats, tea, eggs, asparagus, sorrel, rhubarb and tomatoes.

Dr. Haig's book makes delightful reading and brings to mind the value of a study of uric acid in the blood and urine.

Urea is in health, produced and eliminated at the rate of approximately an ounce a day. In disease it is important to know if the urea is produced and if it is eliminated, if the cell metabolism is going on and if the kidney function is active. I have seen urine in which urea was almost entirely absent. The question of whether cell metabolism is inhibited or elimination of urea is stopped, is a question of two different conditions, both portending death unless changed. In the former the diagnosis is probably well in hand, in the latter a study of the urine is of great importance. The symptoms of retained urea (here considering urea as the index to pigments and nitrogenous waste in general) are remarkably varied, from a general restlessness and irritability to delirium, sensations of numbness, paralysis and coma. How essential to an understanding of these uraemic symptoms is an estimation of the amount of retained waste by an examination of the urine, and how absurd and futile it is to attempt the treatment of such a condition by the pseudo "law of similars." The percentage of urea in urine is easily obtained by the use of the ureometer and the amount eliminated in 24 hours estimated therefrom. While the mere statement of the percentage of urea conveys very little information, the total amount eliminated for 24 hours gives information of great value.

The retention of urea is caused by interference with the function of the kidney by a defect in the circulation, a defect in the kidney or obstruction to the flow of urine. The normal power of the heart to send blood through the kidney is great, as the renal arteries open from the aorta at a point where the blood pressure is high, and the renal veins open into the vena cava where the pressure is very low, hence though the kindneys possess no heart of their own as the lungs do, they get the full benefit of the left ventricle, but the working is dependent upon the hydraulic principles involved. A weakened circulation gives a veinous congestion of the kidney with a retention of waste to poison the blood and still further weaken the heart, thus the tendency of nature is not to mend matters, but to make them worse. It is important to

know in every case of disease, what condition the kidney is in, this can only be absolutely determinated by an examination of the urine. General symptoms of diseases of the kidneys are not marked nor pathognomonic, while the urine analysis gives clear, definite and positive information.

I have not made an effort to collect cases in which the diagnosis of a disease was changed by an examination of the urine, but during the past year I recall three cases of mine where the presence of albumen and casts in abundance changed the diagnosis and treatment. They were all chronic cases and had been treated for other conditions. The result was that two of them returned to fairly good health, while the third died of a uraemic complication, as the autopsy showed. The use of the microscope is to be urged in every case in this work. In a percentage of examinations it will give valuable results where there is little gained from a chemical analysis. I have in mind two other cases during the past year where casts were present without albumen and which were undoubtedly cases of chronic interstitial nephritis. One of these subsequently died, having large amounts of albumen and casts in the urine at the last.

It may be found in the future that a physiological albuminuria is a reality, and that the presence of occasional hyaline casts is not pathologic, but at present with the ordinary methods the former is exceedingly rarely met with. In regard to the latter, Dr. Osler says, in substance, that the large majority of patients in whose urine he has observed occasionally a cast, have developed sooner or later in life, a nephritis.

The extent to which the several kidney lesions interfere with the elimination of tissue waste, varies from very little to total suppression of urine. In the contracted granular kidney, the extent may not be great, and only sufficient to produce mild chronic uræmic symptoms. There may be no swelling of the ankles and no œdema of the eyelids, no albumen, and the only direct evidence may be the presence of casts discovered upon microscopical examination.

Dr. Osler quotes Carter as follows: "If these organs make default, or if there be prolonged obstruction to the outflow of urine, accumulation of some or all the poisons takes place and the characteristic symptoms are manifested, but the accumulation may be very slow and the earlier symptoms corresponding to the comparatively small dose of poison, may be very slight, yet they are in kind, though not in degree, as indicative of uræmia, as are the more alarming symptoms which appear toward the end and to which alone the name uræmia is often given."

It is in the earlier cases that an analysis of the urine is appreciated, when the disease has not progressed far, and when by enforcing a modification of diet and living its progress may be stayed, allowing many more years to life than otherwise could be had. The value of making a urinary analysis in other diseases, as in diabetis, cystitis, posterior urethritis, tuberculosis and abcess of the urinary tract, etc., can not be more than mentioned in the limits of this paper. Our knowledge of the urine is increasing and its position among the means of exact diagnosis is being strengthened. The exact methods are replacing the older methods of symptom analysis wherever possible, and the change is certainly greatly to the benefit of patient and physician.

A JOURNAL DEVOTED TO LEPROSY.

Leprosy is fortunately a rare disease in this country, but to those who are interested in the subject it may be of importance to know that a new periodical entitled International Archives of Leprosy is projected. Communications will be received in English, German or French. The Journal will be under the management of Professor Albert Husser Breslau.

WOODBRIDGE TREATMENT CONDEMNED.

Osler, in writing of the intestinal features of typhoid fever, strongly condemns those methods of treatment which are based upon the view that the disease is enteric rather than systemic. He considers early free purgation harmful and is always glad to see moderate constipation rather than diarrhoea, since these cases have much less meteorism.

He does not disturb the bowels in the course of the disease, except for marked tympanites, hemorrhage, or active diarrhoea and does not use intestinal antiseptics. For constipation he gives injections, dilutes the milk and gives increased amounts of albumen water.

He condemns the Wodbridge treatment. American Year-book for 1899, page 26.

Nineteen young women students are in attendance in the medical department of Cornell University, Ithica, N. Y. They are admitted to all classes, the same as the young men.

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APRIL, 1899.

IS APPENDICITIS A FAD?

A great deal of cheap and silly wit anent appendicitis has been running through the newspapers of late. A new feature has been added by two contributions from physicians, one declaring that no operation is ever needed, and the other (evidently an irregular who cannot be admitted to practice by the State Board of Michigan) advertises a reward of $100 for each and every case of appendicitis which he fails to cure without surgical operation. Even poets have entered the field; poets of the class whose effusions defile the walls of the outhouses of country hotels. Here is a sample:

"No more on earth he'll greet us
He's numbered with the blest:
He had appendicitis
And the doctors did the rest."

In a recent editorial the Minneapolis Tribune says:

"The Tribune's only interest in the matter is to relieve the apprehension of nervous persons in the community in regard to this much-dreaded disease. There is no doubt that many are scared into appendicitis, or into the belief that they have appendicitis, and consequently into much needless suffering. We believe that the disease called appendicitis is a good deal of a scientific fad, and that a good many excellent surgeons are tempted to experiment with it for the purpose of increasing their anatomical knowledge. When it is understood that it is an affliction that readily yields to proper medical treatment, it will occasion no more anxiety than an ordinary case of colic."

Let us see what this "scientific fad" is doing for humanity. The question is often asked, "Why is appendicitis so common now, while a few years ago it was never heard of?" It is not more common now than formerly. When a person died of what we now call appendicitis the cause of death was assigned to some one of the following diseases, viz: Typhlitis, perityphlitis, entero-colitis, peritonitis, intussception, volvulus, intestinal obstruction, typhoid fever, malarial fever, la grippe, bilious colic, acute indigestion, neuralgia of the bowels, salpingitis, ovaritis, gall stones, gravel, psoas abscess, abscess of the abdominal wall, perihepatitis, perinephritis, or coxitis.

The investigations of recent years have shown, 1st—that the rudiment called the appendix vermiformis is frequently the seat of inflammation, often resulting in the formation of an abscess, and endangering the life of the patient by the tendency of the abscess to rupture into the peritoneal cavity; 2nd—that although in many cases the inflammation may subside after a few days, there is still almost a certainty that the patient who suffers one attack will have relapses, any one of which may be fatal; 3rd—that removal of the appendix ensures the sufferer against a recurrence of the disease for all time, and 4th—that the operation in the hands of a competent surgeon is almost free from danger. Those physicians who rely upon medical treatment alone, acknowledge that the mortality from first attacks is 10 per cent. It is estimated by Morris that the eventual mortality is 25 per cent. The statistics of operative cases are much more encouraging. Bull estimated that after cases operated on in the intervals between attacks only two per cent. died, and it is now generally conceded that early operation in the hands of skilled operators would result in a mortality of only 1 per cent.

Each of the 103,000 physicians in the United States, it is probable, attends on an average two cases of appendicitis every year. This would amount to 206,000 cases. Supposing these to be treated by medicine alone and with a mortality

of 25 per cent., the deaths would number 51,500. Supposing them to be treated by early and skillful operation with a mortality of one per cent., the deaths would only amount to 4,120, or a saving of 47,380 lives by timely operation. A "scientific fad" which saves this number of lives every year is a good thing for the country.

AN UNJUST CONCLUSION.

The New York Times in an editorial entitled "Pneumonia and the Doctors," draws the following remarkable conclusions from the case of Mr. Rudyard Kipling:

"Now that Mr. Kipling has been saved we hope the doctors understand that hereafter none of their patients will be content to die of pneumonia. There are few worse cases than that of Mr. Kipling. He was about as desperately ill as a man can be of pneumonia. Yet he was saved, saved by constant skilled medical attendance and the ceaseless vigilance of competent nurses.

"Hereafter when a physician loses a pneumonia patient of good constitution and under forty, what excuses can he hope to give that will satisfy the friends of the deceased? We do not see that he can give any. They will be prone to believe that what has been done can be done again."

We rejoice in the recovery of Mr. Kipling, and have no desire to withhold credit, where credit is due; but there is no evidence before us to show that any hitherto unknown remedy or mode of treatment was employed in the case of the distinguished author. His case was only one of many thousands in which the disease was extensive and the toxic effects of the infection were intense and alarming. In this case the patient and his physicians were distinguished, and the world of letters awaited the daily bulletins in breathless suspense.

During the days in which Kipling's condition was dangerous there were no doubt other sufferers battling with identical conditions and equally in jeopardy. The type of the disease was the same, the treatment was the same, and the outcome alike successful; but the triumph in the one case has been flashed around the world; in all the others it will never be known, for the patients' lots were cast in the humbler walks of life, and the physicians though faithfully and skillfully doing their duty, were unknown to fame.

While Kipling was "saved by constant skilled medical attendance and the ceaseless viligance of competent nurses," his little daughter also suffered from pneumonia and died; yet we cannot for a moment assume that the skill which saved the father was withheld from the child; nor under such painful circumstances can we see the fairness of asking the physicians: "What excuses they can hope to give that will satisfy the friends of the deceased."

Patients suffering from pneumonia are like ships in a storm; if the ship is strong and well managed she may weather the gale and arrive safely in port; another equally strong and well-managed may lose her rudder or spring a leak and go to the bottom.

THE NEW EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

It is with pride and pleasure that we learn of the appointment of Dr. Geo. H. Simmons to the position of editor of the Journal of the American Medical Association. The labors of Dr. Simmons in building up the Western Medical Review have commanded the respect and won the esteem of the profession in the West, and to him is in a large measure due the rapid and healthy growth of the Western Surgical and Gynæcological Association. The selection of our confrere is a compliment to the western country and we feel sure the association will never have cause to regret the choice made by its trustees. We congratulate the Journal and its editor and wish both a long and illustrious career.

THE NEW HOSPITAL AT WINONA.

The Winona Daily Republican of Saturday evening, March 18th, prints a cut and full description of the new hospital for that city just completed by the Winona General Hospital Association, at a cost of over $40,000. From the description it appears to be one of the most complete and best equipped of the hospitals of the Northwest. Any organization contemplating the erection of a hospital in the near future, would do well to examine the plans and this building before deciding what style they need.

The building is seventy feet square with a large court recessed into the second and third stories from the rear. The architecture is of classical Italian style, plain, but very handsome. Up to the first floor the material used in construction is Bedford, Indiana, stone, cut smooth and the remainder of the structure is of buff pressed brick, with Winona stone trimmings.

In connection with the hospital, a school for nurses is maintained, and the applicants for admission are in excess of the number that can be taken, it being limited.

The history of hospital work in Winona is given at length, and the organizations of women, as usual in all good works for the community, show the great assistance they have rendered in

the furnishing and supplying the necessities for the successful running of this largely charitable undertaking.

Mr. Addison B. Youmans generously subscribed $5,000 as a nucleus for the hospital building fund, and a general circulation of the subscription list met with a cordial and liberal reception. The names of those giving one thousand dollars and upward are mentioned, and the total number of subscribers is about 250, showing the united interest of the public in this worthy enterprise.

CHICAGO, ILL.—COOK COUNTY HOSPITAL EXAMINATIONS FOR INTERNES.

Under the rules of competitive examinations which have prevailed in the Cook County Hospital for the appointments of internes, a long list of distinguished names appear as graduates, such as J. B. Murphy, Nicholas Senn, E. P. Davis, J. A. Fordyce and many others well-known and eminent in the profession. It has been lately announced by the county commissioners that the internes would go under civil service and that the competitive examinations would be held by the civil service commissioners. This change the doctors and all the newspapers opposed. During this excitement and discussion the Chicago Record came out one morning with a list of 25 questions, which it supposed would be asked the candidates under the political examinations. Some selected speimens.

1st. In disabling an enemy of good government at a primary election which blow is preferable, one on the inferior maxillary or one in the solar plexus?

2nd. Before pulling a leg, is it necessary to administer an anaesthetic?

4th. Which is the more nourishing food for convalescents, weiss beer or mixed ale?

8th. What is the best brand of knock-out drops? How should they be administered?

10th. In which school of medicine did you receive your early training, the Republican or the Democratic?

12th. Is St. Louis beer an antiseptic?

25th. At post-mortem examinations, who is entitled to the gold in the teeth? (The Journal of the Miss. State Medical Association, March, '99.)

HIS LAST ONE.

"Papa," said Tommy Treadway,

"Now, Tommy," replied Mr. Treadway, "I shall answer one more question today, now be careful what you ask"—

"Yes, papa,"

"Well, go on—"

"Why don't they bury the Dead sea?"

"A reasonable amount of fleas is good for a dog—they keep him f'm broodin on bein a dog."—(David Harum.)

Progress of Medicine.

MEDICINE.

UNDER THE CHARGE OF
J. W. Bell, M. D., C. H. Hunter, A. M., M. D.
J. H. Stuart, A. M., M. D.
David Owen Thomas, M. D., M. R. C. S.

TREATMENT OF CONSUMPTION.

1. Is consumption curable?
2. Is consumption preventable?
3. In what manner is consumption preventable?
4. By what means is consumption curable?

Perhaps not all these questions can be answered with equal degrees of clearness now, but it is certain that the answers that may be given at the present time are by far more satisfactory and encouraging than those that had to be given even less than ten years ago.

It will be interesting to compare what will be said under this head ten years hence. The last decade of this century and the first of the one just dawning will no doubt record most wonderful results in this branch of medicine as well as others.

Dr. S. A. Knoff, quoting the "Immortal Master of Modern Medicine," Louis Pasteur, says: (N. Am. Rev. Feby., 1899): "It is in the power of man to cause all parasitic diseases to disappear from the world. But not only is consumption the disease which can be most frequently cured, especially when the invalid submits himself to treatment during the earlier period of his affliction, but it is also the disease which can be most easily prevented. Indeed, it is the disease which the power of man could cause to disappear from the world with more certainty than any other." We may just as well accept the above statements as comprehensive answers to the first two questions stated at the beginning of the article. Their corerctness may be doubted by some and disputed by others, but with this we are not concerned. We will let the developments of the near future take care of all doubts and denials.

The problems with which we have most directly to deal are, how can the disease be prevented and how can it be cured?

If we do not wish to have our fields encumbered by the Canada thistle or other tares, we must simply prevent the introduction of seeds from which they spring. Consumption or tuberculosis has its "seeds" or germs from which it is propagated. It is true that some soils are much more receptive than others of certain seeds, and that some may be altogether incompatable with their vitalization, but proper care requires that the seed be not lodged in any soil. This means fencing off the portions into which entrance has already been gained as well as the

prevention of further importations into non-infected areas.

"The bacillus of tuberculosis may enter the human organism, firstly, by ingestion, that is to say, through food coming from tuberculous animals; secondly, by inhalation, that is, inhaling dusty air laden with bacilla." These statements very plainly suggest the precaution or procedure necessary by way of prophylaxis or prevention. "It has been demonstrated again and again that the dried and pulverized sputum of consumptives is one of the most frequent means of transmitting this disease."

It follows therefore, that the same precaution should be taken in this disease as in scarletina and diphtheria. All cases of tuberculosis should be reported either by a physician or a householder. The same care should be observed of disinfecting the domicile or apartments as in other infectious diseases. It should be obligatory upon landlords and owners of tenements and houses, that a thorough system of disinfection be carried out; and people seeking apartments should require it. All this should be obligatory by law.

The prevention of tubercular infection from animal sources is of the highest importance and not without its difficulties. The most prolific source is from the cow through both milk and beef, but especially the former. Several of the states have so called bovine laws and regulations on this subject, and circulars are issued for the instruction and guidance of the people, but much in the way of educating the people remains to be done.

It would seem that matters of this kind, as well as the regulation of the qualifications for the practice of medicine ought to be undertaken by the general government.

By what means and in what manner is consumption to be cured? If any one entertains an idea or expectation that it is to be done by specifics, or by the use of drugs or medicines, let him abandon the thought. We may truthfully say that this has been proven in a practical way.

If the race ever regains its health and vigor it must be by retracing its steps to the point of its departure from the conditions that make for health and vigor. There is no short cut to this, nor is there a panacea in the treasures of the whole materia medica. It is not meant here to deny the efficacy of the use of medicines to aid in the recovery of health in numerous instances, but in the case of "the most fatal and the most frequently contracted of all diseases, one-seventh of all deaths being due to it, although it is said to be the most curable of all chronic ailments," this result cannot be brought about in this way. The measures indicated by the following methods indicate the direction in which hope lies: The climatic treatment, the dietetic, the hygienic, the hydropathic, the æropathic and serum therapy.

It can hardly be maintained that by any one of these methods alone can the best results be obtained. The advocates of serum therapy deem all the others essential and employ them as they are required, to obtain the best results. It is questionable whether there be any climate or region on the face of the globe inhabitable by man where immunity from this disease may be enjoyed without due observance of adequate dietetic and hygienic measures. Dr. Knopf says: "Climate can only be considered as only a more or less valuable adjuvant in the treatment of consumption, but not a specific." The same author says "he is in favor of treating tuberculous patients near their homes, and in the same or nearly the same climate as that in which they will have to live and work after their restoration to health. Such principles," he declares, "are founded on the experiences of all modern phthisio-therapeutists, who have demonstrated that the hygienic and dietetic treatment in special sanatoria is feasible and successful in nearly all climates."

Dr. K. says further, that he knows from personal observation that cures of pulmonary phthisis effected in our ordinary home climates, which are on the average not considered as especially favorable to this class of sufferers, have been more lasting and more assured than cures obtained in more genial climates.

There is, we all concede, great good in dry, sunny, genial climates, and also in a proper altitude above sea level, but not all people affected with this disease can migrate to such a climate even if one is known adequate in every way. If patients can be treated as effectually, as is maintained, near their homes where they will have to live, it should be so, for in this way only the great majority will have to be cared for, if they are properly cared for. Besides in this way only can this fell destroyer be coped with. Sanatoria for the cure of consumptives are growing numerous in various parts of the world and we shall in a brief time be informed as to the validity of the statements here quoted.

These institutions are to be found in England, France, Germany and the United States, maintained for the most part by the generosity of individuals. The Czar of Russia, the empress of Germany, the emperor of Austria, the king of Saxony, the king of Sweden, the young queen of Holland, have placed sanatoria for the consumptive poor under their high protection and contribute to their support. There is good reason why governments should supplement if not lead in this great work.

J. H. S.

TREATMENT OF ACUTE GONORRHOEA.

An important "Study in the Treatment of Acute Gonorrhœa" is contributed by Dr. George Knowles Swinburne (Journ. of Cutaneous and Genito-Urinary Diseases, March, 1899). The practical value of this article is made more apparent because microscopical examination of the

urethral discharge was made every day and the effect of each treatment on the gonococci observed in each case.

There were 105 cases treated, but the detailed results of only 46 are given. These were divided into three groups according to the period the disease had lasted before treatment was begun. The gonococci disappeared in some cases in four days, but averaged 11, 14, and 16, respectively, in the different groups, while the full length of treatment ran from 17 to 26 days. However, three cases were prolonged and two became practically chronic.

The plan pursued consisted in flushing out the anterior urethra inch by inch with a hot solution of permanganate of potassium (1-4000). When the posterior urethra was not involved it was not irrigated at all. The patient was made to lie down on a table (to avoid fainting) and the urethra was "gently filled to distention with a two per cent. solution of protargol by means of the ordinary urethral syringe ("one holding two to three drachms being preferable"). The patient by compression of the meatus retains the injection about ten minutes. The meatus then is closed with absorbent cotton and a gauze bandage until next urination.

If the posterior urethra is involved after anterior injection with the protargol has been made, a soft rubber catheter is passed just to the entrance of the deep urethra and half an ounce of a two per cent. solution of protargol is injected through it, which the patient immediately urinates.

The catheter is not to be introduced when inflammatory condition of the anterior urethra exists, and must not be introduced into the bladder except in special cases where the bladder has not been fully evacuated. In posterior urethritis as well as in severe anterior or where hypospadias render irrigation difficult a capsule containing one or two grains of methylen blue and four grains of boracic acid is administered. The irrigation is performed with the greatest gentleness, and if the acute stage is advanced and accompanied with severe inflammation, irrigation is omitted the first day and the protargol alone used (beginning with one per cent.) and the capsule of methylen blue and boracic acid given, warning the patient to avoid coloring his underwear during micturition. In some cases it is advantageous to cocainize the anterior urethra with a one per cent. solution. The protargol in one or two per cent. strength frequently burns but seldom seems to irritate.

The application of the treatment in a case forty-eight hours after the first appearance of the discharge is as follows: "The first visit is apt to be in the afternoon. The second, if possible, the next morning at eight, the patient holding in his bladder the urine from over night. The discharge at this second visit is slight and but few gonococci will be found. The next visit is to be at 6 or 8 p. m., the urine having been held at least three hours. The discharge is very slight, numerous pus cells in the field; often, however, no gonococci to be found. Next visit the following morning at 8. Some edema about frenum, but no discomfort. Pus cells will be found and perhaps a few isolated pairs of gonococci. The next visit that evening at 6 or 8; pus cells but no gonococci; edema of frenum about the same; discharge thin, inclined to be watery, and very slight. The next visit then is made in twenty-four hours, edema almost disappeared; sometimes there is a slight rustiness, due to a tinge of blood, in the very slight watery discharge. Sometimes after a long search, one or two groups of intracellular gonococci may be found, and in favorable cases—in fact in most of the cases of this group—no gonococci are seen again after this. Patient comes once each of the next two days and this finishes the first week.

During the second week he comes every other day. The third week he may be seen twice, then he should report again in seven days. He reports again in a week and is carefully examined, prostate and seminal vesicles being examined also.

Two points in this paper deserve to be emphasized.

1. The percentage of cures was large and the period of treatment short.

2. There were no complications such as epididymitis.

Neisser already had considered protargol a valuable preparation (Dermat. Centralbl., Oct., 1897), but the combination of potassium permanganate and protargol may possess additional merit. T.

GOITRE.

In simple goitre the preparations of thyroid prove effective in about two-thirds of the cases, the results ranging from total disappearance of the goitre to a noticeable reduction in its size. Children and young adults are benefited in the great majority of instances. A favorable result is seldom obtained in adults. Increasing doses seem to procure the most satisfactory effects. The influence of the remedy is felt after the first three or four days in successful cases, and, in a month or so, the reduction of an average tumor will generally have been effected. In order to keep the goitre from returning, the administration of the remedy must be continued, the preparation being given in reduced quantities and at longer intervals.

The results have been practically the same whether fresh or desiccated glands or extract were employed. Its administration should be carefully watched, however, and the dose reduced upon the appearance of any untoward symptoms.

Knoffelmacher (Wiener Klin. Woch., Oct. 10, 1895), says among twenty cases of goitre, in eleven of from two to seventeen years of age, there was considerable diminution, but not com-

plete disappearance of the tumor; in five, from twelve to twenty-one years of age, the amelioration was slight, and in five cases there was no result.

Emminghous and Remhold (Les Monveaux, Remedies, No. 18, 1894), says: Six insane patients with goitre treated surrepitiously, using raw thyroid from the sheep, 1½ or 1¾ drachms concealed in slices of sausage in a sandwich, repeated in ten or fifteen days. In five cases there was an appreciable diminution in the size of the goitre after each ingestion of thyroid. No untoward symptoms.

Bruns (Amer. Jour. Med. Sciences, May, 1895), says: Sixty cases of benign parenchymatous goitre, without selection, treated with thyroid tabloids, two daily to adults, one to children. Duration of treatment from three to four weeks, on the average. In young children complete recovery the rule. In adults recovery rare and less common in proportion to age. Complete return of thyroid to normal size not to be expected later than twentieth year.—Sajous' Annual and Analytical Cyclopædia of Practical Medicine, Vol. I.

Murrell has published in the British Med. Jour., 1899, No. 1987, some results of experiments to determine the effect of certain drugs, like oil of peppermint and oil of cinnamon, used by inhalation, upon the tubercle bacillus. Bacteriological investigation showed that the vapor of neither oil had any deleterious influence upon the bacillus in culture. Twenty patients with pulmonary tuberculosis inhaled the vapors either once or twice daily, or almost constantly day and night, and the results were uniformly unfavorable. The observations extended over six months. A six per cent. solution of formaldehyde inhibited the growth of the bacilli in culture. This solution, or one stronger or weaker, was used in twenty cases by inhalation either once or twice daily, or constantly. In twelve much benefit was derived, two were slightly improved, in the remaining six cases the results were unsatisfactory. R. A. C.

SURGERY.

UNDER THE CHARGE OF

J. H. DUNN, M. D., W. A. HALL, M. D.
KNUT HOEGH, M. D.

Dr. G. G. Davis of Philadelphia (Annals of Surgery, Jan., 1899) contributes an article on fractures of the internal condyle of the humerus, and the correction of the resulting deformity by operative measures.

After a brief discussion of the various fractures of the elbow, he states that in his experience, the most common is the intra-capsular fracture of the internal condyle. Extra-capsular fracture of the internal condyle he has rarely met with—not more than twice. Though intra-capsular fracture of the internal condyle sometimes causes restriction of flexion and extension, it is well known that so-called gun-stock deformity caused by upward displacement of the fragment, is more frequently the defect following these injuries. This deformity does not ordinarily impair the usefulness of the member as flexion and extension are not usually compromised. The author, however, thinks that in girls especially, the deformity is so undesirable as to warrant surgical correction. He also believes that the deformity may impair the function of the member even more than the patient is aware. Upon this rather moderate pretext, the author advocates, in suitable cases, osteotomy of the lower end of the humerus, dividing the bone from the internal side partially but not completely across and breaking or bending the fracture until the fore arm is brought into the desired position.

The author reports and figures three cases operated successfully. He also calls attention to the fact that "gun-stock" deformity may be caused by rickets.

Of late years some discussion as to the proper position of the forearm in treating this fracture has occurred. Some have maintained that the use of right angle splints and flexed position of the forearm is conducive to the production of "gun-stock" deformity, as it is certainly conducive to its oversight by the unwary, since it is only when the member is fully extended that this deformity is apparent, hence the advocacy of the extended position in the treatment of this injury. This position is, however, so inconvenient, if nothing more, that it has not apparently been very widely accepted. It is interesting to know that two of the cases operated upon by the author of the paper, had been treated with the straight splint. As a prophylactic measure against gun stock deformity in the treatment of fractures in the internal condyle, the author advocates a compromise between the fully extended and the right angled position and dresses the arm upon an obtuse angled splint on the anterior surface with a pad over the external condyle, and an additional external splint, this being fastened by broad bands of adhesive plaster. The elbow is then placed inwards towards the side and the bone of the forearm turned outwards. As the union of the fragments is slow and certainly capable of being modified after a much longer time than two weeks, the use of the external lateral splint and pad should be continued for fully five weeks and they be carefully examined twice weekly. J. H. D.

In the Medical Record, March 18th, Dr. Carl Schlatter of Zurich gives a final report of his case of total removal of the stomach.

It will be remembered that the whole stomach of a woman aged 56, was excised for diffuse carcinoma, on September 6, 1897. The patient died of general carcinomatous infection proceed-

ing from mesenteric lymph glands, October 29, 1898, having lived nearly 14 months without a vestige of gastric tissue. For about one year the patient appears to have enjoyed a very fair degree of health, to have gained in weight, to have had good appetite and to have taken both solid and liquid food. During September, 1898, symptoms of rapid recidivation, and in October cachexia, prostration, pain, epistaxis, and death ensued.

The chief interest in this remarkable case is in the demonstration that a fair degree of digestion and nutrition, sufficient not only to support life, but to greatly increase the bodily weight and strength may be carried on without a shred of stomach. Such considerable portions of the stomach had previously been removed for carcinoma, that the surgical world was less startled by the demonstration that complete excision was surgically possible, than by the physiological paradox of digestion without a stomach.

Excision of the stomach, in whole or in part, for cancer is not likely to become a frequent or useful recourse, since it is abundantly proven that disseminate carcinoma is not curable by surgery. Only in the rarest cases is any attempt at radical operation rational. In a slightly larger percentage of cases, if well selected, palliative operations, such as gastro-enterostomy are doubtless well worth the slighter risks and trouble, but after all is said, the vast majority of cases of carcinoma ventriculi are best cared for by non-operative interference, early proper feeding and care of the stomach, later nursing, and final euthanasia.

After a certain time and under some circumstances, to prolong the hopeless struggle for a few days or months, is indeed a questionable victory. J. H. D.

In the New York Medical Journal of Feb. 18th, 1899, is printed a paper written by Dr. A. J. C. Skene, entitled "Electro-Hæmostasis in Surgery."

In this paper Dr. Skene's main object is the elucidation of his method of using haemostatic forceps and clamps which are heated by means of an electric current, in the permanent control of hæmorrhage being adaptable to coeliotomies, hysterectomies and other operations.

"The method of arresting haemorrhage with these forceps consists in firmly compressing a portion of the bleeding tissue, or the end of a blood vessel, between the jaws of the instrument, in order to expel as much of the moisture as possible, and then desiccating the compressed tissues by heat generated in the jaws by the electric current. In this way the walls of the arteries become united and haemorrhage is effectually prevented.

"The forceps is sterilized in the same manner as other instruments. A little sterilized vaseline is rubbed over the inner side of the jaws of the forceps, which will prevent the tissues from adhering to the instrument.

"Before the electric current is turned on a shield is applied, where needed, between the forceps and the adjacent tissues to protect them from injury.

"I may state that I have employed this method in over two hundred coeliotomies and in many vaginal hysterectomies and other operations, and have never had secondary haemorrhage in any of them."

"The advantage that may be fairly alleged for this way of controlling bleeding in surgery is that it is certain and reliable in closing isolated blood vessels or those embedded in masses of tissue, like an ovarian tumor or pedicle, for example. At the same time that bleeding is arrested, all lymphatics are sealed up, which prevents septic absorption."

"Tissues which have become friable by disease and cannot withstand sufficient pressure of a ligature to control bleeding are easily managed by this method. Bleeding vessels in the abdominal and pelvic cavities can be reached and closed with greater facility than by ligation. Nerves that accompany the blood vessels are immediately devitalized and hence there is less pain and irritation in the stump. Recovery is more prompt, uneventful and complete."

In the discussion, Dr. Polk asked the Doctor how far the heat extended beyond the electrodes. Dr. Skene replied "that the shield forceps applied in front and behind the compression forceps, protected the ureter in front and the rectum behind (in vaginal hysterectomies), and the heat did not extend into the broad ligament more than from a line [one-twelfth of an inch] to an eighth of an inch."

Dr. W. R. Pryor said that he had "instituted a series of experiments regarding the effect of the method when blood vessels were treated in continuity.—It was interesting to note that, without charring the tissues at all, an occlusion could be obtained which was four times stronger than the force exerted by the heart."

Dr. Skene in closing the discussion said. "The great point of superiority of the method of electro-haemostasis over the ligature was not in ligation of arteries alone, but in the closing of canals lined with mucous membrane. With a septic uterus and septic tubes one could not close the opening with any kind of suture and absolutely prevent secondary infection. The same remark applied to the closure of the vermiform appendix. If it were closed in the way described, it would be found that it would not reopen. More than this, he could close up the appendix close to the intestine without the heat injuring the bowel." R. A. C.

"Apelles painted a bunch of grapes with such skill that the birds tried to eat them."

"That is nothing, Mr. Van Daub painted a ship in a storm that made every one who saw it sick."—(Vogue.)

OBSTETRICS.

A. B. CATES, A. M., M. D. R. E. CUTTS, B. S., M. D.

MEASUREMENT OF FOETAL HEAD IN UTERO.

Perret (Journal des gages-fem.).

The patient is placed on the edge of the bed and by bimanual manipulation the fœtal head is brought into a transverse position. The occipito frontal diameter is then measured with a branched pelvimeter. From this measurement must be deducted twice the thickness of the abdominal wall which is obtained by pinching up a fold between thumb and fingers and measuring it with the pelvimeter. As the biparietal diameter is known to be approximately 25 m. m. less than the occipito frontal, the former may be readily obtained by subtracting this distance from the occipito diameter as previously estimated.

Perret found by experiment as above described, in 94 cases that the measurement was approximately correct. In each case he waited from 24 to 48 hours after labor, for the head to resume its normal shape, before taking the confirmatory measurements. With two exceptions the variations were not more than 2 m. m. The errors of 3 and 17 m. m. respectively, were due to flexions of the head.

R. E. C.

THE TREATMENT OF NORMAL LABOR.

The Feb. 25th number of the New York Medical Journal contains a good article on this subject by S. Marx.

After doubting the propriety of calling labor, a process producing so much pain, a normal physiological function he hints at the time when science will be able to overcome this painful ordeal by the use of the cataphoretic current on the uterine nerve centers. Marx believes that the secret of complete recovery of health after childbirth is to be found in the practice of asepsis at confinement. He does not approve of the douche either before, during or after, if the vaginal secretion is normal. This secretion is decidedly acid, sticky and gelatinous. The inhibitory action is due to the lactic acid produced by Dodlein's bacillus. When the secretion is normal the parturient canal may be considered free from pathogenic bacteria. The external genitalia are thoroughly scrubbed with soap and water, then washed with dilute alcohol and bichloride solution 1 to 2,000. Great stress is laid upon the preparation of the hands. The ordinary hand cleaning process is spoken of as an "opera-bouffe show." With such thorough asepsis the woman may be examined as frequently as desirable without fear of infection. Careful examinations should be made and as often as may be necessary for the welfare of the mother and child.

The patient, during the second stage of labor is placed on the side corresponding to the position of the presenting part. When the head reaches the pelvic floor drop doses of chloroform are administered during pains until the head is delivered. The protection of the perineum is accomplished by the management of the fœtal head and not by support to the perineum. Flexion of the head is continued to a point of superflexion and if necessary forcible liberation of the occiput and bringing the nape of the neck under the symphysis before attempting to extend the head.

Bilateral episeiotomy not only does no good but does do harm by giving a starting point for large irregular tears. If it is evident that laceration will occur, a deep vulvo vaginal incision is recommended which will permit sufficient relaxation of the outlet and which can be readily sewed up after delivery.

R. E. C.

PAINLESS TREATMENT OF FISSURES IN THE NIPPLES.

Lancet, Nov., '98.

Maygrier and Blendal report on the treatment of 40 cases of cracked nipples. The nipples were dressed with orthoform which produced complete anæsthesia during suckling and kept the cracks aseptic. The powder causes only slight smarting. The infant put to the breast fifteen minutes later nursed eagerly since orthoform has neither taste nor smell. The anæsthesia lasts for some time. Orthoform was tried in form of powder; in a moist dressing of boric acid and in a strong alcoholic solution dropped in the cracks. The alcoholic solution is considered the best since it penetrated the cracks more readily.

Orthoform is a white voluminous powder without taste or odor and absolutely non-poisonous. Besides being antiseptic it is also a local anæsthetic when applied to mucous membrane, fissures, wounds and ulcers and may be given internally.

R. E. C.

COD-LIVER OIL IN PHTHISIS.

Dr. H. A. Hare in his "Practical Therapeutics," makes the following statements: (1) Never use cod-liver oil when the disease has passed the primary stages of thickening of the lung and roughening of the respiratory sounds, unless fibroid changes are going on and the changes are very slow indeed. (2) The use of cod liver oil when rapid degenative changes are occurring in the lung is distinctly harmful, as it is not of any service, disorders the digestion, and destroys the appetite.—Medical Record.

"Oh—your father is a physician, does he practice now?"

"No, he does not practice any more, he knows how."

PEDIATRICS.

UNDER THE CHARGE OF
H. B. SWEETSER, M. D. J. P. BARBER, M. D.

OPHTHALMIA NEONATORUM.

This very vital subject has been discussed in two suggestive papers during the past month; one by Dr. Jameson of Brooklyn, N. Y., on its prophylaxis in private practice (Med. Rec. Mch. 4); and the other by Dr. Ed. S. Peck of New York City on its treatment by the new silver salts (Sec. Pediatrics, N. Y., Academy of Medicine, with discussion).

A. PROPHYLAXIS.

Dr. Jameson shows the importance of prophylaxis in this disease by calling attention to the percentage of cases of blindness due to its ravages. Thus it caused 8 per cent. in Copenhagen; 20 per cent. in Berlin; 30 per cent. in Vienna; 33 per cent. in Germany and Austria; 20 per cent. in Philadelphia; 24 per cent. in the Illinois State Institute, and 19½ per cent. in the New York State Asylum. He sums up his conclusions as follows:

(1) Prophylaxis has reference to three periods—before birth, at the time of birth, and after birth. Before birth make the birth-canal as sterile as possible: At the time of birth, cleanse the infant's eyes with some mild antiseptic, as boric acid solution, and then employ Crede's method, viz., instil one drop of a 2 per cent. solution of nitrate of silver in each eye upon the lids and cornea; and after birth use some mild cleansing wash for a number of days several times daily.

(2) Reliance upon the condition of the infant's eyes at birth, is apt to be deceptive, as during the stage of incubation the gonococcus may lie dormant and so produce no disturbance.

(3) The absence of external evidence of specific discharge from the birth-canal is not proof that specific infection does not exist.

(4) The discrimination between private and hospital patients in the practice of prophylaxis is inconsistent, as the disease is common in both classes.

(5) Finally the objections to nitrate of silver as a prophylactic and remedial agent do not seem to be clinically sustained; on the contrary, it possesses ideal properties for counteracting this disease.

B. TREATMENT BY PROTARGOL AND ARGONIN.

Dr. Peck said that the tendency of recent times has been to look for remedies which, while capable of destroying the gonococcus, will be milder in their action than the nitrate of silver.

The distinguishing feature of protargol and argonin is that they are not precipitated from solution by albuminous fluids; and the advantages claimed for them are: (1), quick destruction of the gonococcus; (2), earlier disappearance of the secretion and of the inflammatory process; (3), the more prompt restoration of the injured cornea and other tissues to the normal.

Protargol is a yellowish powder, readily soluble in either hot or cold water and not readily decomposed; contains more silver than the nitrate, and should not ordinarily be used in greater strength than 0.5 to 2.0 per cent.

Argonin is a white powder, making a turbid solution in warm water, which is readily decomposed by heat, and is then highly irritating; contains less silver than the nitrate, and may be used in stronger solution than 2 per cent.

Protargol is especially useful as it may be combined with various salts, as Nacl, and is unaffected by cocaine, atropine, and eserine, and is the only silver salt not precipitated by dilute hydrochloric acid.

In the early stage of a case of purulent ophthalmia a half or one per cent. solution of protargol is forcibly projected, by a large pepette. over the cornea and conjunctiva, four or more times a day. Later, when the secretion lessens and becomes shreddy, a 2 per cent. solution is used at longer intervals.

In conjunction with this use of protargol, the inflamed eye is to be treated by the continuous application, night and day, of ice-pads, no interval being allowed until there is positive evidence of diminution in the quantity of the secretion; and also by frequent irrigation of a saturated solution of boric acid. [For this irrigation, a solution of antinosine does remarkably well.]

In his cases so treated the gonococcus had disappeared ordinarily after five weeks, but sometimes as soon as two weeks; they had exhibited less corneal ulceration, with iris protrusion and imprisonment; there had been an earlier cessation of the inflammatory process; and the patients had suffered less than where nitrate of silver had been used. In the Crede method of prophylaxis he thought protargol could be substituted for silver nitrate with advantage, as it was much less irritating and equally good as a germicide.

In the discussion which followed, argonin was considered as of little use further than as an astringent, seeming to have little effect as a germicide, while protargol was thought to compare favorably with the older nitrate salt, and to possess the added advantages of slight irritability and non-precipitation by albuminous fluids.

It was brought out that, after all, it must be admitted that the chief factors in the successful treatment of gonorrhæal ophthalmia and ophthalmia neonatonun were thorough cleansing and skillful nursing.

H. B. S.

The American Surgical Association will meet in Chicago May 31 to June 2.

CHOREA.

Treatment. (Cyclopedia of Practical Med., Feb., 1899.) The first matter of importance in the cure of chorea consists in keeping the child in bed. The most useful drugs have been found to be antipyrin in the early stages and acute cases, and arsenic in the later stages and in chronic or recurrent cases. Arsenic, to be efficient, must be given in adequate doses, ten or even fifteen minims of the Fowler's solution being reached in 14 days if the symptoms do not decline. A complicating endo-or pericarditis is best treated with salicylates.

If the movements are so violent as to cause contusions, or so continuous as to cause exhaustion or loss of sleep, sedatives are required, chloral and bromide being generally serviceable in doses of ten to twenty grs.

During and after convalescence the patient must be kept from competition with others, either in school or on the playgrounds. The best tonics are iron, and sojourn in the country or at the sea shore. (Treatment, Nov., 1898.) [Moncoroo, of Rio Janeiro, has treated chorea very successfully with analgene in doses which varied from two to eight grams in twenty-four hours, the drug being well tolerated by children.] H. B. S.

ENEMA RASH IN CHILDREN.

Still (Brit. Med. Jour., Oct. 22, 1898). Rashes following enemata are rare, but are of considerable importance in children, inasmuch as they are very easily mistaken for some of the eruptive fevers to which childhood is particularly exposed. The rash has a characteristic appearance and course. It is usually a bright-red patchy erythema, appearing especially on the front of the knees, the backs of the elbows, the buttocks and face; but is, in some cases, scarlatiniform, or the two forms may be combined.

There seems to be no reason to doubt the causal relation of the enema, for in some of the cases observed a repetition of the enema was followed by a repetition of the rash. It appeared most often twelve to twenty-four hours after the enema, and lasted twenty-four to twenty-eight hours, and rarely was accompanied by any constitutional symptoms. It most frequently followed a first enema; and the amount and time of retention of the enema, or the duration of the preceding constipation did not seem to affect its occurrence. It occurred most frequently in children over six years, but was noted in one child two and one-quarter years. It is most likely to be mistaken for scarlet fever, rötheln and measles, and is to be diagnosed by absence of constitutional symptoms, and of sore throat and coryza, by slight differences in character and distribution of rash, and by its occurrence following an enema. It seems probable that some of the cases of so-called "surgical scarlet fever" are the results of enema given before operation. Three possible explanations of the production of these rashes are suggested: (1) absorbtion of some toxic substance from the enema; (2) absorption of some fecal toxin rendered soluble by the enema; (3) a reflex effect on the vaso-motor centres. It is most reasonable to regard the rash as due to a vasomotor change produced by absorption from the intestine of some constituent of the enema or feces.—(Monthly Cyclopedia of Medicine.)

Eye, Ear, Nose and Throat.

UNDER THE CHARGE OF
J. D. SIMPSON, M. D.

"EYE LESIONS IN SOME DISEASES OF THE KIDNEYS."

At a meeting of the New York State Medical Society, Dr. Oppenheimer, of New York City (the Ophthalmic Record, January, 1899), read an interesting paper on the above subject. He said that the most frequently observed lesion of the eye in connection with disease of the kidney, was retinitis albuminurica. He states that these cases were almost always associated with hemorrhage, which darkened the prognosis, as it might be assumed that the same condition was present in the brain. Dr. Oppenheimer believes the retinal condition to be dependent upon the condition of the blood associated with cardiac hypertrophy and high arterial tension.

Uremic amblyopia occurring in the course of nephritis incident to exanthemata or during pregnancy should be distinguished from true retintis albuminurica. The former is accompanied by headache, nausea, vomiting, scanty and albuminous urine, and more or less loss of vision. Uremic convulsions may occur. The prognosis is usually good in these cases, and the reaction of the pupil to light proves the blindness to be of central origin. The ophthalmoscope reveals no appreciable lesions. Albuminuric retinitis, on the contrary, comes on gradually in the course of chronic nephritis and is accompanied by distinct retinal lesions.

J. D. S.

SUPRARENAL CAPSULE IN EYE, EAR, NOSE AND THROAT WORK.

James E. Newcomb, M. D., (the Laryngoscope, January, 1899), had his attention called to a possible use of extract of supra-renal capsule in certain affections of the nasal mucosa by an interesting paper read by Dr. Henry L. Swain, whose conclusions are as follows:

1. The aqueous extract of suprarenal gland is a powerful ocal vaso-constrictor agent and a contractor of erectile tissue. It can be used in very considerable amounts without dangerous or deleterious effects, locally or constitutionally.

2. These same effects can be reproduced in the same individual apparently any number of

times without entailing any vicious habit to either the tissue or the individual.

3. The use of the extract seems to heighten the effect which might be expected from the local use of any drug.

4. In acute congestions, it has the widest application and greatest opportunity for good, but in certain chronic conditions of the hay-fever type, where redundant tissue seems prone to develop, it can be relied upon as one of the most helpful adjuvants at our command.

Locally the extract has been used in solution in various diseases of the eye, ear, nose and throat. For this purpose a watery preparation can be employed. It does not keep well and must be freshly made. From ten to twenty grains should be dissolved in an ounce of water and the resulting mixture filtered after being thoroughly shaken and allowed to stand for several hours.

Upon mucous membranes it is without doubt the most powerful astringent we have, and it can be used for a variety of purposes. One drop of a one per cent solution instilled into the eye will blanch the conjunctiva and lid in forty seconds. Hence a possible use is in cases of hyperesthesia of the conjunctiva where it is desired to induce anæsthesia by the later use of cocaine. Adrenal extract is not anesthetic or antiseptic. It is also incompatible with cocaine, and must therefore be used in alternation with the latter. It is really remarkable to notice how the redundant tissue so often met with in the nose will shrivel and become pallid when the solution is applied. Of course in hay fever, it is only alleviative. But it does relieve to a very great degree the most troublesome symptom from which these patients suffer, namely, the stoppage of the nostrils by the engorgement of the intra-nasal tissues. It has been used by many of the workers in this special field and their testimony is practically unanimous in its favor.

It comes in commerce as the saccharated extract of the adrenals of the sheep, and costs about two-thirds as much as cocaine.

Dr. W. F. Southard (Pac. Med. Jour., Nov. 1898) at first found it necessary to have a new solution made every two or three days, but has succeeded by prolonged boiling in making a stable solution without in any degree impairing its virtues.

His most satisfactory results have been from its use in operations on the nose. In using the solution, the nose is first cleansed; a 4 per cent solution of eucaine is then applied upon cotton for five or six minues. This is followed by a 4 per cent solution of the extract applied on cotton.

J. D. S.

DAVID HARUM'S RULE FOR A HORSE TRADER.

"Do unto the other fellow the way he'd like to do unto you—and do it fust."

CLINICAL MICROSCOPY.

UNDER THE CHARGE OF

J. FRANK CORBETT, M. D., G. D. HEAD, M. D.

BACTERIOLOGY OF DIPHTHERIA.

The word diphtheria is derived from the Greek, and means literally, quick skin. Before 1888 it was defined as an acute specific disease, both epidemic and contagious, characterized by specific inflammation of the mucous membrane, chiefly of pharynx and air passages, attended with enlargement of the lymphatic glands and an exudation of fibrin or non-organized lymph and its deposit upon affected surfaces. Such a description would cover about one-half of the cases which we recognize as diphtheria today.

Holt describes diphtheria as an acute specific communicable disease due to Kleb's Loeffler bacillus. Accepting this definition we may include all diphtheritic infection, whether limited to air passages or not, and exclude all other infection of the throat or air passages.

Under bacteriological examination we find that what was formerly described as diphtheria included three or four distinct infections. In the ordinary work of bacteriological examination for diphtheria of respiratory tract four varieties of germs are met with.

First, the most common is the staphylococcus, growing in large colonies and of large size.

Second, a rather rare form in pure culture—is the streptococcus, occurring in chains and much smaller in size than the preceeding.

Third, a certain diplococcus which is sometimes obtained in pure culture from membrane.

Fourth, the Kleb's Loeffler bacillus.

Of course mixtures of all four of these are not uncommon.

From data supplied with specimens submitted and from actual cases, in all about 200 in number, we have summarized as follows:

In staphylococcus infection the membrane is usually in spots, limited to the tonsils. The temperature is high, and in cases where data could be obtained, the pulse full and bounding. The membrane is an exudate, occurs in crypt of tonsils and is easily detached, and rarely spreads beyond the tonsils. It is generally highly infectious, commonly going through the entire family.

In the streptococcus cases, that is, in cases where we could get nearly pure cultures of streptococci, for a considerable period of time, are included cases which closely resemble diphtheria in clinical behavior. In these cases the membrane is frequently not limited to the tonsils but may spread over the fauces and is rather persistent. The temperature is low and the pulse high. The writer has had two such cases under close personal observation.

To give a clear idea of the results of this streptococcus infection on the throat, a descrip-

tion of one of the above mentioned cases is given: The patient was a male, aged 35, at the City Hospital. The tonsils, uvula and pharynx were covered with a white membrane, not easily detached. The temperature was but slightly elevated, and the pulse rapid. The case was at once diagnosed as diphtheria and anti-toxins administered. At the same time smears were taken, some of which were sent to the state board and others examined at home. Both gave pure cultures of streptococci, as did subsequent cultures. The antitoxin used alone did not affect the case, as usual in other cases, and the membrane persisted until treated with peroxide of hydrogen.

The third class includes those diphtheria-like throats from which pure cultures of some diplococcus can be obtained, but in regard to these cases all we can say is that in several instances we have been able to get tolerably pure cultures for a considerable period of time, and assumed from these that they were the cause of the membrane.

No attempt will be made here to review the classical symptoms of throat affection in which Kleb's Loeffler bacilli were found, suffice it to say that cases have been examined varying from mere catarrhal inflammation to most severe membraneous involvement which showed Kleb's Loeffler bacilli. The temperature has generally been under 101°. Two cases were presented in which it was 103° and 104° respectively. One case of relapsing diphtheria was reported, that is, several successive recurrences of membrane occurred with an accompanying constitutional disturbance. This patient suffered relapses—so-called—in which the membrane would reappear and disappear at intervals of six or seven days for a period of six weeks. One week after this the throat cleared from germs and no relapses occurred. What appeared to be a chronic diphtheria has occurred twice. In neither of these was there a typical onset. These throats simply appeared swollen and œdematous, and yielded pure cultures of diphtheria from some of the deeper crypts for a period of two to three months. The temperature and pulse throughout were normal. Virulence was occasionally tested and found to be true diphtheria.

The most interesting cases are those of diphtheria localized and found outside of the respiratory tract. One of these was a boy suffering from otitis media in whose throat Kleb's Loeffler bacilli were found. The throat became free of diphtheria germs, but it appeared later that he had possibly been the means of carrying the disease to others, and so an examination of the ear was made, and bacilli were found. After using peroxide of hydrogen as an ear douche, all the germs other than diphtheria were apparently killed off, but the Kleb's Loeffler bacilli still persisted and could be obtained in pure culture. When the peroxide was discontinued for a time, the diphtheria bacilli were found mixed with cocci and other bacteria. The ear finally cleared under 1-500 bichloride of mercury and remained clear.

Another interesting case was one in a small child where the umbilicus was affected. This child had had a slight catarrhal diphtheria some time past and had just about been relieved from quarantine when the umbilicus began to be infected.

In one case of vaginal diphtheria the Kleb's Loeffler bacilli were found. This followed also a very severe attack of tonsillar and pharyngeal diphtheria. Germs may have been accidentally present.

One case presented marked cerebral disturbances following tonsillar diphtheria, resembling mania. This case recovered, and so the diagnosis of diphtheria of the membranes is only probable. From the fact that Kleb's Loeffler bacilli have been isolated by the state board, from a case dying of meningitis, we might be given grounds for assuming that this was a case of diphtheria of meninges or brain.

In addition to the presence of the Kleb's Loeffler bacillus, Sidney Martin claims there is one more essential feature to diphtheria and that is nerve degeneration. He claims to have demonstrated changes in the epithelium resulting from this in all of the mildest cases.

In connection with this it is interesting to mention a case of the very mildest type, with no membrane, which was followed by very extreme paralysis.

In cases of laryngeal diphtheria, the bacilli have been found in about 50 per cent. of the cases. It is interesting to note that in all fatal cases that have occurred during 1898 the Kleb's Loeffler bacillus has been demonstrated to be present at a very early stage.

J. F. C.

NEURITIS CAUSED BY SURGICAL OPERATIONS.

H. T. Pershing refers to the number of cases of painful localized palsy he has met after recovery from anesthesia employed for surgical purposes. Usually these accidents are due to long-continued pressure during anesthesia, either through force for maintaining the patient in position, by the dragging of the limbs over the edge of the table, or by the continued elevation of the arm over the head, as in amputation of the breast. He suggests that for the prevention of this accident "the patient's arms should not be allowed to hang down, and care should be taken that during operations the weight of the body is as evenly distributed as possible. Keeping the patient in any constrained position should be avoided when not absolutely necessary, and the use of any mechanical contrivance for maintaining a desired position should be with due care to prevent nerves from being stretched or pressed upon."—Am. Year Book of Med. and Surg.

Hospital Clinics.

ASBURY METHODIST HOSPITAL

Surgical Clinic by F. A. DUNSMOOR, M. D.

Professor of Operative and Clinical Surgery in University of Minnesota.

NINE CASES—ELEVEN OPERATIONS.

We have a very busy and interesting clinic this morning, since there are eleven operations to be made, arriving during vacation, and it will require the entire forenoon even with such competent assistants as there are here, but by having the anæsthetics and preparations made in the adjoining room we will lose little time between cases.

CASE 1. FIRST OPERATION—VENTRAL HERNIA.

The first case is one of ventral hernia. Mrs. B., housewife, age 30, four months pregnant, has previously borne five children, and has at this time, also a vesico vaginal fistula, made over a year ago for the purpose of removing the calcareous deposits and draining the bladder. In reference to this operation, Mrs. B. had been a sufferer from cystitis for the last four years, passing occasionally soft phosphatic sediment with the urine, and occasionally small concretions, but never sufficiently hard to be properly termed a stone or calculus. Since the operation, she has been very much improved in her bladder symptoms, but of course, has been unable to retain her urine, on account of the fistula, which we shall close this morning, immediately after the repair of the ventral hernia. This hernia, as you see, is in the median line, 1½ inches below the umbilicus. You notice as I make this long incision over the tumor, which is about the size of my double fists, that we come upon the envelope or sac of the hernia, which, of course, is the peritoneum. We now open this and find the sac contains omentum, which is firmly adherent to the sac walls in every place except immediately at the neck of the herina, or where it emerges from the opening between the recti muscles.

We separate these adhesions as rapidly as possible, and since there are bleeding points, we now proceed to ligate off the larger part of the omentum which protrudes from the neck of the sac, and thus cut the body of the hernia off. We purposely make the ligations in small sections since the omentum is most likely to slip from the grasp of any ligature which is applied to a large part of its mass. The remaining portion is readily reduced within the abdominal cavity, and I pass my index finder through the opening and detach some adhesions of the omentum which are attached to the peritoneum in the immediate proximity of the opening through which the hernia escaped. This done, we are ready to close the wound. The larger part of the sac is now cut away and the part nearest the ventral opening is dissected clear from the muscle and stitched together with fine cat gut and pushed through the opening to the peritoneal side. The ring is now split so as to expose as much as possible the muscular surface, and deep interrupted stitches of cat gut are passed through the muscle and fascia, being careful to make the superficial layer of the aponeurosis approximate exactly with that of the opposite sides. The skin is united by fine silk worm gut stitches, and binder applied.

CASE 1. SECOND OPERATION—VESICO VAGINAL FISTULA.

We now put the patient in the lithotomy position for the second operation, and the broad sims speculum retracts the perineum. Then with the volsella, we pull the upper vaginal wall to the vulva, and with this narrow bladed knife, denude the mucus membrane around the vesico vaginal fistula, after having washed out the bladder thoroughly with boric acid solution. The stitches are introduced through the vaginal mucus membrane and muscular wall, being very careful not to penetrate within the cavity of the bladder at any point. We purpose leaving the stitches ten days; and now distending the bladder with water whitened with milk, we are enabled to determine that the fistula is completely closed.

CASE 2.—ULCER ON LEG.

In order to expedite matters, we will ask Dr. Little to take charge of the third case upon the table at the right, while I operate upon this scaroma of the skull.

Dr. Little's case is Miss B. A., domestic, who has, as you see, an ulcer as large as the palm of my hand, upon the outer surface of her leg, three inches above the ankle. These ulcers are usually dependent upon varicose veins, syphilis, tuberculosis, or old age. Since this is a young woman who has no varicose vein, or any history of injury, we have to choose between two constitutional troubles. There is nothing in the history to show to which one of the constitutional forms we should attribute a cause for this ulcer. However, as to the method of cure, Dr. Little will completely excise the entire ulcer, borders and floor, and make deep incisions down through the skin, one inch to the outside of the ulcer, right and left, slide these flaps of skin as soon as detached to the center of the space occupied by the ulcer, uniting them with suture, filling in the space left by their removal with Tierche skin grafts taken from the patient's thigh.

CASE 3.—CANCER ON HEAD.

My patient, here on this table, as you see, is an elderly man, over 60 years of age, book agent. This growth above his left ear has been increasing slowly for four months. Two months ago a physician in the country lanced it, saying, "It is an abscess;" but nothing more than a little bloody serum escaped from it. Ten days ago, he called upon another physician, who told him, "You have delayed longer than you should; it is an abscess and should be opened at once." He made a deep incision in the tumor from above downwards, as you see by the scar, with no better results. The reason these physicians secured no pus at the time of their incisions is because there was none there, and it is evidently a sarcomatous growth. The discharge which constantly flows from his left nostril indicates that this communicates with the ethmoidal cells, either by pressure or the extension of the disease to those parts.

First, we shave the scalp for a distance of two inches beyond the tumor. We make an incision four inches in length with the center over the most prominent part of the growth. The skin flaps are separated quickly and I pass my finger down close to the skull in order to lift the growth from its bed, and we find that all of the skull is gone, to the distance of three inches in length perpendicularly, and two inches in breadth, directly back from the auditory meatus. The lowest portion involves the mastoid cells, which we scoop out with sharp bone curette down to tip of the mastoid process. Now, we carefully separate the mass from above downwards close to the dura mater, snipping part of the way with the scissors, and part of the way separating with the dry dissector. Just as we finish the dura gives way from the sinus, and as you see a terrific hemorrhage which gushes forth demonstrating that we can proceed no further in this direction. We, therefore, pack the sinus so as to control the hemorrhage, with iodoform gauze, since there is no opportunity to secure any bleeding vessel. This effectually controls the hemorrhage, and now we go carefully over the surface of the dura with a sharp curette to be certain there is no bit of the disease left. Next cover the whole wound with sterile gauze, and apply the ordinary bandages for the retention of the dressing.

There is extreme probability of recurrence in such cases, although at this time it appears as if we were beyond the tissure affected by the cancer.

CASE 4.—OVARIAN TUMOR.

The patient who is coming in at this moment, Mrs. G——, housewife, age 30, married, one child, age 6, and one miscarriage 3 years ago, has an ovarian tumor four inches in diameter in the right side. A growth of this sort is so readily removed per vaginum, and there is so much less probability of contamination of the abdominal cavity, and also escape wholly the possibility of a ventral hernia, we have selected the former method for its removal. With a broad retractor, I pull back the perineum and with the volsella, grasp the neck of the uterus which is drawn well forward, and with this long knife make an incision clear across the vagina in the Douglass Pouch, cutting through to the peritoneum. I now pick this peritoneum up with a pair of artery forceps, and one-half inch further along with another pair, which I hand to the assistant to hold. Drawing these apart, I snip with the point of the scissors an opening between these two forceps; now introducing my finger through this opening, I cut with the scissors, the finger protecting the parts behind, until the opening in the peritoneum is sufficiently large for me to pass two or three fingers as far as is desirable. You notice the blue color of the tumor which immediately fills the space. I reach in with a pair of volsella forceps and grasp this blue wall which immediately begins to collapse from the escape of the clear fluid which it contains. I make the rent considerable larger with a knife and pull the sack down as rapidly as possible and spear through with a needle armed with number fourteen cat gut, tie off the sack, cut the pedicle off the tumor, and present you the specimen. We fill the vagina loosely with gauze and the patient is immediately ready to be sent to the bed in the ward.

CASE 5—DISPLACED UTERUS.

Mrs. M., age 30, Jewess, sterile, menstruation painful, markedly in the groins, with a history of the flow stopping several times between the first and second day, patient suffering great pain before it starts. She has the neurotic symptoms of supraorbital head-ache, dizziness, and nausea, associated with the menstrual period. Upon examination we find a two-thirds normal sized uterus high up in the vagina, very sharply antiflexed, conical cervix, the tip pointing upward behind the pubes.

Our treatment will consist in dilating the canal thoroughly with this uterine dilator, at the same time forcibly straightening the uterus; but as we are sure that within two days after the influence of the anesthetic is passed off, it would resume its ordinary shape, we introduce this glass plug which completely fills the canal and is one-third inch in diameter.

This last is acocmplished with some little difficulty and is indeed the most tedious part of the operation. Pushing the cervix as far back as possible toward the Douglass Sack, we fill the vagina sufficiently with iodoform gauze to hold it in this position. We find that there is difficulty in retaining the glass stem within the canal a sufficient time to establish a complete correction of this flexion. I have ordered glass stems that have upon either side of their shoulders perforations which will permit the introduction of a

suture which may be stitched to the outer side of the lip of the uterus, thus retaining the pessary within the uterine canal as long as we desire.

I have never yet had an infection from this procedure and have had better results following the wearing of these plugs until after the next menstrual flow, than I have by any other manipulation for the relief of this condition.

Mrs. M., housewife, age 24, married 7 years,

CASE 6—FIRST OPERATION—TRACHELORRHAPHY.

Mrs. M., housewife, age 24, married years, one child 6 years old, one miscarriage, present trouble commenced with birth of child. Has great pain in pelvis at menstrual periods, which are regular, and during micturation has lucorrhea and bregmatic headache; appetite good.

We find upon examination a bilateral tear in the cervix extending to the vaginal junction, hypertrophy of each lip, which is studded with distended mucus follicles, and a plug of thick mucus protruding from the canal as an evidence of the existing cervical catarrh, and we premise in addition, that the inflammation extends to the upper part of the uterine canal as well. We also find the uterine body extremely retroflexed and the fundus firmly fixed in Douglas cul de sac.

We make a dilation of the internal os, and with a sharp spoon, curette the entire surface of the uterine cavity, immediately applying full strength compound tincture of iodine. We now denude the area of the laceration on each side of the cervical canal, making Emmet's operation which has been given the title of Trachelorrhaphy by Dr. E. C. Dudley, who was Dr. Emmet's student at the time Dr. Emmet was describing this operation for the relief of conditions like these present.

We introduce cat gut stitches instead of silk worm gut at this time since we do not wish to disturb the uterus at the time it would be necessary to do so if stitches were used which would not become absorbed in the course of a month. This on account of the operation which is to immediately follow, known as ventral suspension. The vagina now is cleansed by ½ of 1 per cent. solution of lysol.

CASE 6, SECOND OPERATION—VENTRAL SUSPENSION.

While the interne is making the usual preparations for the abdominal operation, we recite the reasons which make us select the operation for ventral suspension instead of Alexander's operation of shortening the round ligaments. The latter operation, in my opinion, is especially adapted to those cases where there is a retroversion instead of a retroflexion, and where the uterus can be readily replaced, and easily maintained in the correct position by the use of a properly fitted pessary. As I have stated before, this is a case of severe retroflexion and there are adhesions posteriorly which do not permit returning the uterine body to its normal position, but which I am sure can be readily divided as soon as we have opened the abdomen.

It is a fact that a hernia follows the operation of shortening the round ligaments through the inguinal region, oftener than when the operation for suspension is made in the median line.

Now, our patient is ready. Two strokes of a sharp scalpel expose the white line known as Linea Alba which we divide by the next movement; two fingers introduced into this incision separate the muscles to the extent of 1½ inches, and expose the peritoneum. My assistant picks up the peritoneum upon the opposite side with Pean forceps, while I do the same upon this side, pinching that part of the peritoneum between the fingers to be sure that the intestine has not immediately followed it. The peritoneum is opened and the index finger of the right hand is introduced immediately into the pelvis and begins the process of raising the fundus to its normal position. The adhesions are sufficiently firm to make it better to introduce the second finger alongside of the index finger, and the two together separate the adhesions which have caused the uterus to maintain its flexed position. Now that the womb is perfectly free, it is forced into its normal position.

We select a point on its anterior surface about one-half inch from the juncture with the bladder, and scarify a place as large as a little finger nail at its point; now introduce one cat gut suture through the mural peritoneum, then taking one-third of the uterine structure under the lower half of this point just scarified. The needle is next made to penetrate the peritoneum on the opposite side and the suture is held by the assistant. The next stitch is silk worm gut which is introduced through the skin, fascia, muscle, and peritoneum, then into the uterus, there buried for nearly one-half inch under the upper half of the scarified surface upon the uterus, and now enters the peritoneum upon the opposite side, the muscle, fascia, and skin coming out exactly opposite the point of entrance at the lower part of the external incision. These two stitches will be all that is necessary to attach to the uterus. They do not in any way wedge the uterine body into the line of the incision which is made for the purpose of this operation; but simply agglutinates this little scarified spot on the anterior surface of the uterus to an area of similar extent in the peritoneum of the anterior wall, sufficiently long to make an adhesion certain, and also insure that the uterus cannot escape from its new position until this adhesion has become what we term a ligament, which, in time, will grow in length sufficiently to allow all the motion necessary for the movement of the uterus in the pelvis. This ligament is low enough down on the surface of the womb so that it shall not inter-

fere in any way with the progress of gestation, should the patient become pregnant.

In the earlier operations the uterus was usually sufficiently antiflexed to allow the stitches which maintained it in its position, to be introduced upon its posterior surface; as you can readily see or imagine from this description, when such a fixation or suspension was present and pregnancy occurred, there was a decided pathological condition present as a result of the operation, and in more than one case it was necessary to produce a Porro operation. The stitches necessary to close this abdominal incision having been introduced and the binder applied, the patient is put upon a stretcher and sent to bed.

CASES 7 AND 8.—REMOVAL OF THE COCCYX.

The two cases which next appear require the same operation, although one is a male, age 28, carpenter, a hard working man—the other a lady of leisure. The man has excessive pain in the region of the coccyx as soon as he lies down after a day's work, and from description, it is characteristic of neuralgia, affecting the nerves in the vicinity of the terminal spine, or coccyx. The lady is 40 years of age, fleshy, housewife, multipara, has had a ventral suspension, and now has coccygodynia, which is most excruciating when in a sitting posture.

The operation for the relief of this condition is exactly the same in each case, and consists in the removal of the coccyx and a portion of the first segment of the sacrum, necessarily dividing all of the nerves which would be involved upon bending the coccyx in either direction. The depth at which the tip of the coccyx is found makes it usually necessary that a drainage tube be introduced, even if the skin is brought together at the uppermost portion of the wound, since there is such an opportunity for contamination of the stitches from the proximity of the wound to the anus. In this case, however, we will try by buried cat gut sutures to sufficiently approminate the deepest portion of the wound, and if a good union takes place at once, we shall avoid a sinus which usually persists for some time after this operation is made.

CASE 9.—MUSCULAR ANCHYLOSIS.

Mrs. S., housewife, age 19, family history negative, one child two years old, has had scarlet fever two years ago, perfect recovery, later an attack of the measles from which she never recovered. Six months ago she had the first menstrual period since the attack of the measles, limbs began to contract two years ago. She has great pain in the region of the left hip beginning some seven months ago, since which time she has progressively lost flesh until as you see, she appears little more than a skeleton covered with skin.

This grotesque deformity which results in the flexion of both thighs tightly against the abdomen and crowded so that the right knee is at the left of the left thigh, and each leg presses tightly down upon the posterior surface of the thigh, and each foot has the characteristic deformity known as Equinus. Now that the patient is asleep, we see that although there is sufficient ridgity so that we can lift her from the table, using the feet as a handle, the ankylosis is false, or due to the contracting of the muscles and tendons, and there is no true or bony ankylosis present.

We make a subcutaneous division of the fascia below the anterior spine of the ilium, and divide the tendons or each ham string, and then by gradually extending the limbs, we find, after considerable force is applied that each leg can be brought down to a line with the body; although the knees are still crowded together by the contraction of the adductor muscles of the thigh, and the feet show the characteristic droop incidental to paralysis of the extensor muscles of the leg.

There is a scar upon the posterior surface of the left hip where there has been a discharge from a psoas abscess or a bed-sore. The history which comes with her is so meagre that we could not say which; but all of the conditions of the patient indicate that there was probably tubercular disease in the region of the psoas and iliacus muscles, probably at the sacro-iliac synchondrosis. So this patient will be put upon remedies to try to cure a disease which has produced these conditions; that is to say, we will give nuclein, the syrup of hydriodic acid, chalybeates, and "stuff" her with the best nourishments which can be procured for her. Meanwhile we apply adhesive strappings which reach to the upper third of the thigh, these secured by the appliance of a roller bandage throughout the entire length of each limb. A weight of four or five pounds will be attached to the cord which runs through the pulley and is fastened to a block inside the strapping and below the foot.

As soon as this patient is put to bed and she recovers from the effect of the anæsthetic, on the return of pain, she will try to flex the limbs as far as possible to overcome the pain, which is incidental to our manipulations. We shall, of course, be obliged to continue the effect of morphine, to the use of which she has become addicted during her illness, until after the pain, which must necessarily result from this operation, has ceased, afterward the dose of opiate will be gradually reduced; and within ten days I will warrant that we shall withdraw the drug altogether. We shall furnish massage and passive motion daily so that there may be no further tendency to anklylosis. Yet the probability is not great for full restoration of the function of the limbs owing to the tubercular disease now apparently localized at the sacro-iliac juncture.

Although I have kept you an hour beyond the allotted time I am sure it has been to our mutual interest.

ST. BARNABAS HOSPITAL.

Surgical Clinic by A. W. ABBOTT, M. D.

Clinical Professor of Diseases of Women in the University of Minnesota.

AN INTRALIGAMENTOUS OVARIAN CYST.

This patient is 24 years old; married three years, but never had a living child. She had a miscarriage about two years ago. This was followed by inflammation in the pelvis from which she was confined to the bed nearly a month. Since then she has had an increasing pain in both sides of the pelvis, more marked upon the right side. She is unable to work, as being on her feet brings on sharp pains and faintness. She has menstruated regularly and without much pain. The flow has been normal in amount. She is not emaciated and pulse and temperature are normal. As she is now under the anæsthetic we will make a thorough examination bimanually. I find the uterus normal in size and position. It is somewhat fixed and upon the right side I find a globular mass as large as a lemon evidently fluctuating, immovable, with its upper limit at about the level of the horn of the uterus. I cannot feel anything like an ovary distinct from the tumor. On the left side the tube is swollen, does not fluctuate and seems to be continuous with the ovary which I can just make out. The ovary is fixed and about opposite the middle of the uterus. What is the character of the mass upon the right of the uterus? As it fluctuates, we know that the contents are fluid; from its position we infer it to be tubal or ovarian; and from its globular shape that it is ovarian, and finally from its fixedness that it is either bound down by adhesions or that it is intraligamentous. This we cannot positively determine until we have opened the abdomen. The mass upon the left is evidently an inflamed tube and ovary fixed by adhesions. I make the usual median incision, and having opened the peritoneum find the omentum adherent all around the rim of the pelvis. This I carefully separate and passing two fingers into the pelvis, find the conditions substantially as indicated by the previous examination.

Beginning on the left side I separate all the adhesions of the tube and ovary until I bring them up freely into the wound. You can see that the tube is twice its natural size, and that the fimbriated extremity is entirely closed and rounded. Freeing the adhesions on the right side I find that the tube lies upon the tumor, is about normal in size, but that the tumor itself seems to lie for the most part inside the broad ligament. We will now elevate the patient into Trendelenburg's position and pushing back the intestines carefully pack gauze in front of them so as to wall off the pelvis from the rest of the abdominal cavity. Evaporation and cooling are thus prevented and if we find pus in the tubes or tumor, it will be kept from contaminating the rest of the peritoneum. On lifting the abdominal wall with a retractor we find that the tumor is a thin-walled cyst, that it is entirely ovarian and that the greater part of it is covered by broad ligament, both in front and behind. It is therefore what we call an intraligamentous ovarian cyst.

We first tie off the ovarian artery and then put a ligature on the uterine end of the tube. We now dissect off the broad ligament in front and behind and ligate the base of the tumor which is close to the ligature of the ovarian artery which we have just applied. I now cut through the pedicle and the tumor comes away without hemorrhage. The edges of the broad ligament are now folded together and a single stitch of cat gut will hold them in place. Having cut the tube just outside of the ligature on the tube, and having dissected the broad ligament in front of the tube, and the dissection of the broad ligament behind being begun low down, the tube was released with the tumor.

Upon the left side the ovary being quite healthy, we shall try to retain this organ and put the tube in as normal a condition as possible. I now open the clubbed end of the tube with scissors and with this probe find that it is patulous throughout. If we should leave this tube simply opened, it would soon close again. I therefore turn the edges over and stitch them back with fine catgut.

The patient is now lowered to the horizontal position, the gauze removed, the bowels allowed to resume their natural position and the omentum nicely replaced and smoothed out. The peritoneum we sew with a running catgut suture. The rest of the abdominal wall we will close by figure-of-eight silk gut sutures. I forgot who first described this suture, but I think it is altogether the best yet devised. The silk gut being prepared with needles at both ends, we introduce one so as to include first a part of the muscle and about one centimetre of the theca on one side. With the other needle the other side is treated in the same way. The sutures are now crossed and the needles carried through the fat and skin opposite to the side on which they were first introduced. The muscle and theca is therefore included in the lower loop and the fat and skin in the upper. This insures a perfect coaptation of the muscle and especially the theca, and this latter we generally reinforce with two or three catgut sutures cut short and buried.

The First International Otological Congress was held in New York City in October, 1876, and the sixth congress is announced to be held in London from August 8th to the 12th, this year The coming session promises to be both interesting and instructive to the profession.

Book Notices.

ANNUAL AND ANALYTICAL CYCLOPEDIA OF PRACTICAL MEDICINE. By Charles E. de M. Sajous, M. D., and One Hundred Associate Editors, Collaborators and Correspondents. Illustrated with Cromo-Lithographs, Engravings and Maps. Philadelphia, New York and Chicago. The F. A. Davis Company, Publishers. Price, Cloth $5.00; Half Morocco $6.00.

The first volume of the above named cyclopædia begins with Abdominal Injuries" and ends with "Bright's Disease." It gives clear and practical information with many illustrative cases of abdominal lesions, beginning with contusions which may frequently produce grave results, while the apparent and external effects may be slight; all these cases calling for careful investigation and a reserved judgment as to a prognosis. Quotations from the literature of reported cases are abundant, and well adapted to throw light upon such points as will prove of the highest advantage to the physician seeking guidance in any given case that may present itself for treatment. Indeed, from the numerous cases cited it would seem possible to find a duplicate for almost any accident that could occur. Modern surgery, with prompt treatment, has saved many lives after very serious internal injuries to the abdominal organs.

The literature concerning wounds, penetrating and non-penetrating, is liberally quoted and analyzed. Wounds from military arms of modern construction are fully described, and conservative treatment advised. It has been demonstrated that wounds from these missiles are much less dangerous and heal much quicker than the lacerations made by the old Springfield and other rifles of earlier date.

The symptoms and management of cases of abortion are thoroughly described, and the viability of the fœtus noted. Formerly it was thought that the seventh month was the clinical age of viability; but the use of the incubator and artificial feeding has saved children born during the sixth month, and that is now considered clinically and legally the viable age.

Considerable space, as the interest of the subject warrants, is given to the animal extracts, and especially to those of the ductless glands, "whose functions are now known to be intimately associated with metabolism, and have taken the lead over all other portions of the animal organism utilized."

Appendicitis has received such attention as the disease rightly demands, on account of the great number of cases now diagnosed and saved by timely surgical treatment; such cases as formerly often succumbed and deaths were reported under various forms of internal inflammation.

Physicians will find in this volume the latest and most reliable information on the subjects treated, condensed to its useful and practical form.

NERVOUS AND MENTAL DISEASES. By Archibald Church, M. D., Professor of Mental Diseases and Medical Jurisprudence in the Northwestern University Medical School, Chicago (the Chicago Medical College), Chicago; and Frederick Peterson, M. D., Clinical Professor of Mental Diseases in the Woman's Medical College, New York; Chief of Clinic, Nervous Department, College of Physicians and Surgeons, New York. Philadelphia. W. B. Saunders, 925 Walnut Street. 1899. Price, Cloth $5.00, net; Half Morocco $6.00.

This work is written by two authors separately, although on subjects closely related; in fact the diseases of the nervous system and mental diseases are so intimately connected as to make any distinction sometimes difficult.

In the opening chapters on nervous diseases, Dr. Church gives minute and practical suggestions concerning the systematic preliminary examinations of patients as to their mental states and physical systems; physicians following these instructions, and aided by such instruments as science has provided, cannot fail to thoroughly ascertain all the information of the real conditions for the proper foundation of successful treatment.

The chapters on brain diseases and localization are full, and well describe the different conditions according to the most recent knowledge of these several matters. There are now so many competent observers studying the brain and spinal cord, that new views and new discoveries are constantly being advanced, established by experiments and aided by such light as disease occasionally exhibits. In brain tumors skiagraphy has assisted the author, Dr. Church, in the diagnosis, and this new element in examinations may prove of greater aid in the future.

Dr. Frederick Peterson, in his portion of the work, has successfully carried out his design in bringing together such matter in relation to the definition, classification, etiology, pathology, symptomology, and treatment of insanity as to be a ready reference and of practical value to the medical student and general practitioner.

In the classification, the author has followed that recommended by the statistical committee of the Medico-Psycological association of Great Britain for use by the medical superintendents of asylums, and also that made for the state hospitals for insane in New York by the state commission in lunacy; but he has divided the thirteen chapters of the book among eight different topics, which has greatly simplified the arrangement.

The author has quoted liberally from the autobiography of a paranoiac to make prominent the symptoms of that sometimes obscure and troublesome form of mental disease.

The combined work is a credit to the authors and publisher, the text being well prepared, and

the printing and the 305 illustrations clear and expressive. Students and general practitioners will be fully compensated by owning and reading carefully this up-to-date treatise on nervous diseases and insanity.

Correspondence.

THE SYMPTOMS OF RENAL AND VESICAL CALCALI AS THE PATIENT KNOWS THEM.

To the Editor of the Medical Dial:—For a layman to contribute to a journal almost exclusively read by the medical profession is like carrying coals to Newcastle; it is said, however, that an ounce of experience is worth a pound of theory.

In 1883 I became aware of some impending trouble in my left kidney, from the following symptoms: A burning pain with a kind of gyrating movement, i. e., winding, twisting, grinding as if determined to bore a hole through either the kidney or the body. This burning, grinding pain would continue sometimes for 3, 5, 10, or more days, then it would pass away—probably for as many days.

A year later, however, the grinding, burning pain became more intense, and the intervals of cessation gradually less. I found the urine extremely acid (determined by litmus paper), with large deposits of mucus and blood. At this stage I had numberless attacks of renal colic, i. e., vomiting, purging, and increased pains in the lower part of the abdomen, immediately above the pubes.

On these occasions the abdomen would be drawn in, forming a kind of a cavity about 4 inches in diameter and in the center about two inches deep—saucer form; the testicles being tightly drawn up and the tension extremely painful.

The last attack lasted about four nights, i. e., the attacks would begin about 7 or 8 p. m. and last to about 4 or 5 a. m., the colic ceasing during the day. After the fourth day the calculus dropped from the kidney into the bladder, from which it was voided the 3rd day thereafter. It proved to be an uric-acid calculus about the size and shape of a coffee bean.

About 18 months later I again began to micturate more frequently, reducing the intervals from 2 to 3 hours, to 20 or 30 minutes, or even less time; and each micturition becoming more and more painful.

The symptoms I experienced from the presence of the first calculus appeared again, only in redoubled form. The renal colic appeared more severe and continued longer. On former attacks I was, at times, much relieved by applying hot fomentations; now they seemed inadequate to allay the severity of the pain. The muscles of the scrotum became, if possible, more rigid; the tension being communicated to the kidneys, hence more painful.

At this time I consulted Dr. Hurry Fenwick, F. R. C. S., 14 Saville Row, London W., who prescribed colchicum, lithium, etc., and advised me to drink daily two and one-half bottles of Krönen Quelle Wasser (Crown Springs water of Germany), which I continued to do for about eighteen months. During this period of Crown Spring water, lithium, calchicum, etc., drinking (eighteen months), I voided seven uric-acid calculi—all formed in and voided from the kidney—yet each one voided was accompanied by similar painful symptoms and effects.

For the next two years I was free from stone, and trusted I should remain so, but it was not to be, for I soon (in two years) began to feel those peculiar symptoms which once felt are never forgotten. I thought I had suffered the extreme limits of human endurance—vain thoughts! The severity of the new and later pains were increased seven-fold. The last eighteen days previous to voiding this one, I suffered from renal colic every night, and several times I had a slight attack during the daytime, which latter I had never experienced from any of the others.

I consulted Sir Henry Thompson of the University College, London, who prescribed hot fomentations, home-constructed vapor baths, lithium, etc., however, after eighteen days of terrible sufferings, physically and mentaly, I voided a brown mulberry stone, almost circular in form, about a quarter of an inch in diameter, and an eighth of an inch in thickness; the peaks of the mulberry being much like a prickly burr. It is these sharp, thorny, prickly peaks which tear and scratch and cause such terrible agony to the sufferer. It is a well known fact that a mulberry will take many times more days to "pass" than any other kind of calculi, on account of its prickly, thorny, sharp-edged points and edges, which stick fast into the flesh in its passage, only moving on when forced by the urine, or muscular action of the body, when it tears itself away only to fasten itself, octopus like, onto another part, probably only half an inch further on, to begin again its cruel torch of fire and torturing but half told.

I questioned Sir Henry as to the probable cause of the rapid and frequent formation of stone in the kidneys. He replied that a person, who was indulging in such a bad habit as to grow a calculus every few months, ought to avoid all kinds of sugar-sweetened articles of diet, all red meats, all fats, butter, cheese, milk, strawberries, figs, plumbs, grapes, beer, wines, etc., in fact, avoid sugar and alcohol in any or every form, take plenty of out-door exercise, frequent bathings, etc. Well, most of "these things have I observed from my youth up"—namely:—I am a life abstainer from alcohol and tobacco. I do not drink a quart of coffee or tea in a year; for

seven years I abstained from all meats, during the period of renal calculi.

For sweetening cocoa I have always used saccharin. For the past twenty years I have taken a Turkish or Russian bath once a month, and in the intervals a fresh water bath; I have several hours of out-door exercise every day, hence, the solidification of uric-acid and phosphates must owe its cause to some other source.

To refute the diet theory Dr. F. J. Freyer, M. Ch., 46 Harley St., London W., told me that he successfully operated, for stone in the bladder, on a male child only nine months of age, the mother of which never had calculi troubles. Again, he told me that stone was much more frequently met with in India than in Europe.

However, I desired to insure myself, if possible, against having another caculus.

I now consulted Dr. Reginald Harrison, F. R. C. S., 6 Berkeley St., London W., who, among other remedies, advised me to try Piperazine, made in Berlin; so, for the next eighteen months I took about twenty-five grains daily, in water; and of lithia tabloids about twenty grains daily. The latter I have now used for the past ten years, but with what success I know not except that for the next two years, after voiding the last stone, I was free from pains, and was congratulating myself for having overcome the awful tendency of biennially forming a stone.

However, I had scarcely passed the two year limit, when I again felt the warning symptoms, in connection with micturition. The first intimation I had was that the flow would sometimes suddenly cease, which caused intense pain. I soon discovered that the cause was the stone blocking up the entrance to the urethra. Here, then, was a new and sadly painful experience—a desire to micturate, yet, at times, an utter inability to respond. As the stone grew in size the blockage became more frequent, with the result that the inner meatus ultimately became inflamed and sore, by reason of the rough edges of the stone being pressed against the tender flesh, and thus cutting and bruising it more and more, as the frequency of desire to void the urine increased, until the stone became too large to be moved or swayed by the action of the water, when it would lie on the floor of the bladder.

Of other painful sensations I will add that riding in an omnibus or jolting street car, or any sudden movement, became the cause of greatly increased pain and suffering; also lying on one side or the other, whilst in bed, had to be continued on the side first chosen, for as the body turned so would the stone turn and roll, and in its rolling around in the bladder would cause untold suffering.

One would think these painful experiences, narrated in the foregoing, were about as much as one could bear, but not so; for there is still a more painful one than heretofore described, namely:—at the end of micurition the meatus would burn as if hot scalding water or acid were passing, and, as if there had been red hot needles pricking the meatus. Now, surely this is the limit of human suffering! Vain thought—turn the screw yet another thread, says this merciless stone evil; for it frequently happens, especially in phosphatic formation, that a small fragment will break off, varying in size from a pin-head to that of a pea, and slowly wind its way through the urethra, often getting stuck in its passage, and taking from five to fifty hours in passing out; and in its passage cutting, tearing and lacerating tender and bruised flesh.

Of these small pieces of salt-like fragments, I have voided perhaps over one hundred.

After thus suffering for about two years I consulted Dr. F. Swinford Edwards, 55 Harley St., London W., who advised an immediate operation by lithotrity—Dr. Bigelow's process. This stone crushed in the bladder, was an uric nucleus with a phosphatic covering, weighing nearly 700 grains. In this operation Dr. Edwards was ably assisted by Dr. Hurry Fenwick, of 14 Saville Row, London W.

About a year later I was operated on a second time for another stone in the bladder. Dr. Edwards, with the eminent assistance of Dr. Reginald Harrison, of 6 Lower Berkeley St. W., London, performed this second operation. A year later I was operated on again for a third calculus, this time by Dr. Arthur Dean Bevan, of Chicago; and about 6 months later for a fourth, again by Dr. Bevan, and two days later Dr. Bevan discovered two more phosphatic stones, which he crushed and extracted by the lithotritic operation. Four months later, February 9th, 1899, I underwent in Minneapolis my sixth operation under the care of Dr. J. W. Macdonald, F. R. C. S., assisted by Drs. Hoegh and Dewar, and up to the present time I am free from symptoms of recurrence.

I am sincerely yours,
(Revd) Percy M. Clarendon,
Minneapolis.

It is said that cider effectually exterminates the typhoid fever bacilli.

"Dr. Blank is a specialist, is he not? What's his specialty?"

"He has two—consultation and fees."

In September, 1899, it is planned to hold an international conference for the prophilaxis of syphilis and venereal diseases, in the city of Brussels, Belgium.

St. Louis now has a medical library of which the physicians there are proud. The membership is divided into three classes, viz.: (1) life, on payment of $100; (2) active, on payment of $25 the first year, and $5 annually; and (3) associate, on payment of $5 for the use of the library. The last have no voice in the conduct of the business of the association. There are already about seventy-five members or more.

Miscellany.

THE MICROBE.

Since the fall of man we've dosed our kith and kin,
We've boil'd our herbs as potions for their ills;
We've striven to get the upperhand of sin,
With infusions, and with tinctures and with pills;
But we've kept a-dying younger all the time,
The av'rage limit's now three score and ten;
Methuselah roll'd up his hundreds nine,
But the microbe wasn't down to business then.
Here's to you, little microbe! and your chum—the bacillus;
We are "on to you," but ages you have been "a-doin' us."
Here's to you little microbe! in your secret habitats,
Whilst you've been absorb'd in business, we've been "talking thro' our hats."

No! He never thought of danger in the least,
He thought he knew enough to save him whole;
He mingled with the rev'ler at the feast,
And enjoy'd the fairy function heart and soul.
He went into the spirit of the toast,
And got into the body of the guest;
He was always very partial to the host,
For he'd entertain with zeal nor ever rest.
Here's to you, little microbe! and the cocci and the spore,
You're a microscopic robber, that's kill'd lots and's after more;
Here's to you little microbe! you Frenchman epileptic,
We have Waterloo'd you squarely with the Lister antiseptic.

He was dipping in our victuals constantly
And a bathing in the water of the well;
It was dangerous to eat and drink you see,
And to tell the truth 'twas hardly safe to smell;
For he'd float upon the breezes we'd inhale;
Yes! he'd ride upon the cushions of our bug!
He was happy as a prisoner out of jail,
In his palanquin upon the chubby pug.
Here's to you, little microbe! with your confidential style;
We couldn't navigate you 'till we had your chart on file;
Here's to you, little microbe! you are no acquatic sport,
In the antiseptic ocean you can never get to port.

There's no doubt you have a sphere legitimate,
But the colon we maintain is sacred ground;
And we're going for our antiseptic kit,
Every time we know that you're a-fooling round.
We don't want you in our stomach or our chest;
We won't have you in our liver or our spleen,
Get into our pancreas, if you think best,
But remember that our antiseptic's keen.
Here's to you, little microbe! you're no sluggard in a fight,
You used to be a slugger, and a wrestler out of sight;
Here's to you, little microbe! we can box and twist you now.
With the Lister antiseptic you're "not in it," in a row.
And here's to you, little microbe! tho' your star is on the wane
And you'll never be the aggressive social potentate again.
Here's to you, little microbe! for your death we've cast the die,
Tho' we still must hold your mem'ry blazon'd on sarcophagi.

—(Maritime Medical News.) M. H. A.

The Ninth International Congress of Ophthamology will be held in Utrecht, August 14th to 18th, inclusive. The English, German and French languages will all be official at this gathering.

It is announced that a very large exhibit, for the examination of the physicians in attendance, will be made at the meeting of the American Medical Association at Columbus. The manufacturers and agents of preparations and medical appliances are, it is said, making more effort this year than ever before to show the respective merits of their goods.

The Mississippi Valley Medical Association will hold its twenty-fifth annual meeting at Chicago, September 12th to 15th, inclusive. An elaborate program has been prepared for the occasion and it is anticipated that it will be a notable gathering of well-known disciples of Esculapius. Dr. Henry E. Tuley of Louisville, is the secretary, to whom titles of papers should be sent early to secure places on the pragram.

The following medical societies of Minnesota are entitled to representation in the American Medical Association: The Minnesota State, Cross River Valley, Fillmore County, Hennepin County, Interurban, Olmstead County, Ramsey County, Southern Minnesota, South-Western, St. Louis County, Wabasha County, Winona County, medical societies; the Minnesota Academy of Medicine, and the Minnesota Valley Medical Association. It is to be hoped that all these organizations will be well represented in the meeting in Columbus, Ohio, which convenes June 6.

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RHEUMATISM.

Dr. George White, of Chicago, in a recent article on rheumatism, has shown that the profession stands largely in the dark as to the nature and true cause of the affection.

In many cases which were capable of being diagnosed as rheumatism, he found clinical histories which were wholly incapable of scientific grouping. He regards the affection, as it is commonly seen, as due in the largest number of instances to an excess of uric acid in the blood, or to syphilis, and in some cases all the symptoms seemed to owe their existence to the strumous diatheses.

In the treatment of the disease the particular causes are, of course, zealously sought and treated, and relief from pain guaranteed. The best constitutional remedy Dr. White has found to be Henry's Tri-iodides, which is justly considered, not only by him but by other observers also, as the efficient alterative.

The Pulvola Chemical Co., New York, have opened up a new era in the therapeutics of external medication. Their little brochure on "Dolomol Compounds in Dermatology Syphelography etc.," is a dignified, scientific presentation of the subject of dry treatment of diseases of the skin and its therapeutic index is a comprehensive guide to the solution of many vexed questions in the treatment of many cases that come to the attention of the general practitioner. They also are sending out half tone illustrations of photomicrographs contrasting the crystaline talcum with the truly impalpable Pulvola.

Consul Skinner announces that an eminent physician, Dr. Calmette, of the Pasteur Institute of Lille, has discovered an antivenomous serum, that is effective at any time within four hours after the bite.

THE PROPER TREATMENT OF HEADACHES.

J. Stewart Norwell, M. B., C. M., B. Sc., House Surgeon in Royal Infirmary, Edinburgh, Scotland, in an original article written especially for Medical Reprints, London, Eng., reports a number of cases of headache successfully treated, and terminates his article in the following language:

"One could multiply similar cases, but these will suffice to illustrate the effects of antikamnia in the treatment of various headaches, and to warrant the following conclusions I have reached with regard to its use, viz.:

(a) It is a specific for almost every kind of headache.

(b) It acts with wonderful rapidity.

(c) The dosage is small.

(d) The dangerous after-effects so commonly attendant on the use of many other analgesics are entirely absent.

(e) It can therefore, be safely put into the hands of patients for use without personal supervision.

(f) It can be very easily taken, being practically tasteless."

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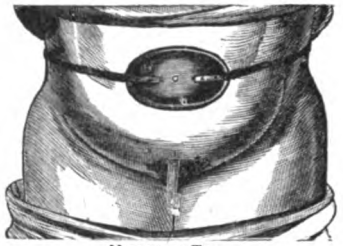

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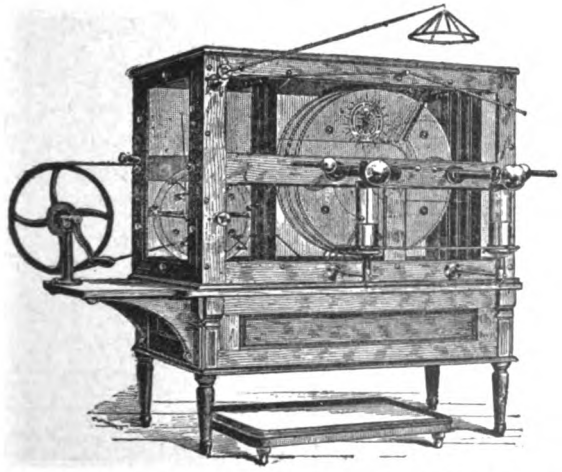

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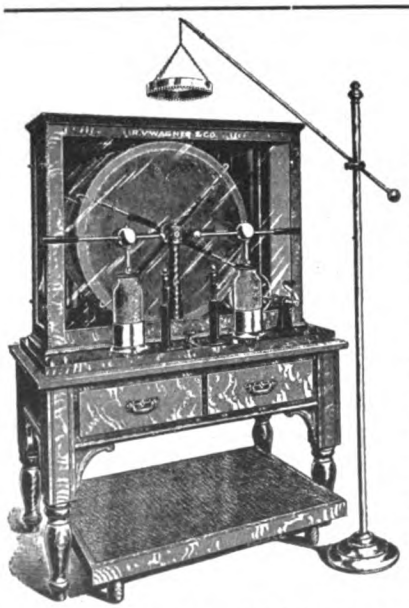

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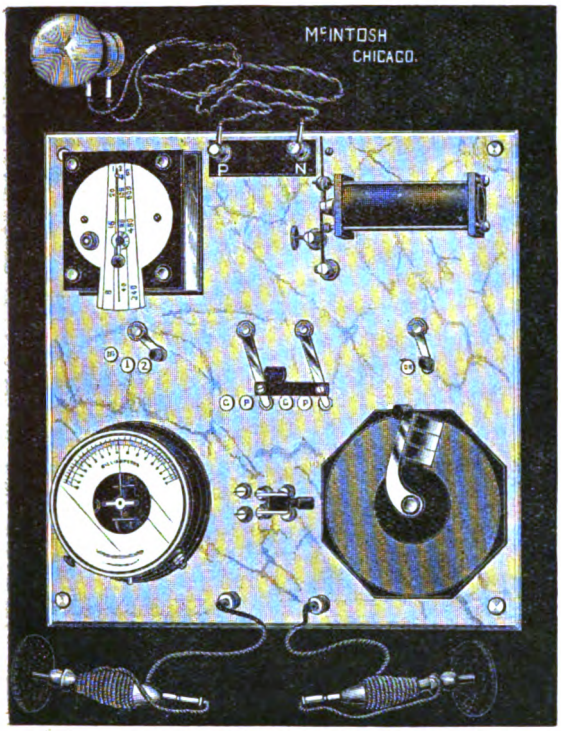

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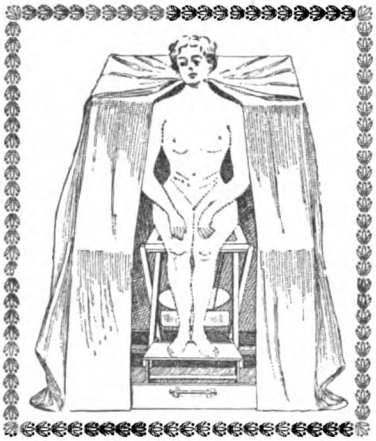

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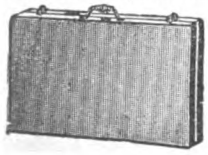

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Original Articles.

*GALL-STONE SURGERY.

By KNUT HOEGH, M. D.

Professor of the Principles of Surgery and of Clinical Surgery in Hamline University.

There is a certain analogy between diseases of the biliary system and those of the urinary system. There are the physiological excretion of normally aseptic fluids, which by infection may become septic, a tendency to formation of concrements, painful crises of a colicky nature, a liability to inflammations of the canals with danger of extension in continuity of tissue, a chronic impairment of health, a difficulty of diagnosis—in fact, a number of conditions that produce similarity. At the same time there are great differences, mainly owing to the fact that while the urinary system is only partly covered by peritoneum, the whole gall-producing apparatus is intraperitoneal. As a consequence of this difference, surgeons have boldly attacked urinary stones from remote antiquity, while the surgery of the gall apparatus has been allowed to lie fallow, until a couple of decades ago.

While the presence of stones is the most common indication for operations on the biliary system, it is not the only one. Traumatism with subcutaneous rupture of the bladder or ducts, followed by effusion of bile into the peritoneal cavity, demands prompt surgical interference; as soon as the presence of bile in the peritoneum is established by the demonstration of an intra-abdominal fluid, after a severe contusion in the region of the right hypochondrium, evacuation of the bile becomes imperative. The bile may be found free in the lower part of the abdomen, or it may form a swelling in the right hypochondrium; symptoms of shock will necessarily be present; some degree of peritonitis with distension of the abdomen; icterus (from resorption of bile by peritoneum), occasional absence of bile in feces—these will be the leading symptoms.

The injury is of course very often fatal, but quite a number of cases have recovered. However, no case is known to have got well except when the bile has been removed by puncture or incision followed by drainage. In the reported cases the puncture was usually performed to relieve the patient from the enormous distension which seriously interfered with respiration; in some cases it had to be repeated several times. Effusion of normal bile into the peritoneum is, consequently, not by itself a very dangerous incident; it does not lead to suppurative peritonitis, but rather to a serofibrinous one, with formations of adhesions. Its proper treatment is aspiration, if necessary, repeated; if there are adhesions, then incision with drainage.

It will always be difficult to diagnosticate the seat of the rupture; if it is the gall-bladder, it would seem to be good surgery to perform laparatomy and extirpate the gall-bladder.

The most common cause of disease in the biliary system is connected with the production of stones. There have been various theories as to the origin of stones. Mr. Waring in his "Diseases of the Liver" concludes that stones usually depend upon some obstruction to the flow of the bile. Naunyn in his "Klinik der Cholelithiasis" mentions the effect of micro-organisms. It is probable that these two causes are in a certain way mutually dependent upon each other, and that they are the leading etiological factors.

The gall-bladder is a reservoir that is only occasionally emptied; if it cannot completely void its contents, owing to some obstruction or to muscular inefficiency, micro-organisms find an almost ideal breeding place where all conditions favor formation of concrements.

*Read before the Hennepin County Medical Society.

Not all gall-bladders are possessed of the same degree of expulsive power. In this relation attention should be directed to a peculiar feature in the history of gallstones. It is well known that they are more common in females, and in the aged.

Why is this? May it not be that it is because the gall-bladder in these two classes is more apt to have its muscular and expulsive strength impaired? In women laxity of the abdominal wall is apt to follow from repeated childbirths, from obesity, and from a congenitally less developed muscular system. When the intestines lose their normal support of the abdominal muscles, they are apt to fall forward; they are thus unduly dilated, and circulation in them is then impaired. This is followed by venous stasis, poor nutrition of the intestinal muscle layer, diminished peristalsis, flatulence, heartburn, constipation, autoinfection from resorption of intestinal products, all resulting in a weak general nutrition, and sluggishness in the portal circulation. The dragging of the pendent viscera upon their mesenteries, and the general fatty degeneration and the abdominal liposis must necessarily interfere with the muscular contractibility of the walls of the gall-bladder. Of perhaps equal importance is the vicious mode of dressing prevailing amongst the female sex, whereby the liver becomes distorted and displaced. In these conditions we see cause enough why women should be more liable to have gallstones than men.

The prevalence of gallstones in the aged strengthens the supposition that loss of contractibility is a factor in the production of these concrements, for it is precisely the impairment of muscular force that is the most common evidence of senility. We believe that stones are produced by bacteria, and that these bacteria find their most suitable soil in the stagnating bile; that faulty nutrition of the body at large has at best a very remote connection with the formation of gallstones.

There is every reason to believe that gallstones are formed mainly in the gall-bladder; and that those which are found in the cystic and common ducts have originally come from the gall-bladder and have been arrested in the narrower canals. The stones that are occasionally found in the liver are always connected with disease in the biliary ducts, and secondary gall-bladder disorders.

Whatever may be the cause, the effects of stones are certain enough; they are all kinds of inflammations in the biliary system and its neighboring organs, catarrhs, suppurations, ulcerations, peritonitis of the covering of the adjacent organs, general peritonitis, strictures, twists, and adhesions leading to great disturbance of physiological action. Furthermore, we see the concurrence of stones and cancer so often that we are constrained to believe that there is a certain causal relation between them. Thus Czerny found thirty cases of carcinoma in 162 cases operated on for stones. This is too great a proportion to be a mere coincidence. There is in fact nothing in our accepted ideas of cancer to make such a supposition improbabel; long continued irritation is often associated with the production of cancer in other organs, so that we have come to look upon it as a predisposing, if not the efficient, cause.

Among the more immediate effects of stones are the colics that are so striking in the intensity of their pain, that they have been looked upon as by far the most serious effects of stones.

It was supposed that stones were harmless as long as they were quiet, that their chief danger was colics, and that these were brought about when the stones tried to escape from the bladder. We must admit that quiescent stones often give no symptoms whatever, that many a stone has been found postmortem in people who have exhibited no symptoms of disease of their biliary system. But then we have much evidence to prove that quiet stones are by no means harmless. We will upon inquiry find that the greatest number of persons who suffer from gallstone colic have previously suffered from other symptoms referable to the biliary system. It is common to have the patients state that they for a longer or shorter time have had some slight discomfort in the right hypochondrium; this was followed by various forms of obstinate dyspepsia. The patients were unable to digest food well and easily; they would suffer from cardiac oppression, flatulence, nausea, pain after meals; others would suffer from constipation; others again from biliary vomitings. The patients had been thoroughly examined by competent men, and nothing had been found that could explain why the dyspeptic symptoms refused to yield to ordinary treatment. Finally the patient had an unmistakable attack of biliary

colic, and the explanation of the long-continued dyspepsia was found in the presence of gallstones in the bladder.

The effects of gallstone disease upon the biliary organs are usually quite injurious. We often see a catarrh that spreads from the biliary ducts to the liver, through all the ducts, leading to secondary formation of stones in the liver, and inflammatory disease of this organ, phlebitis, local cirrhosis and hypertrophy of certain lobes. Riedel has drawn attention to a localized hypertrophy that leads to the formation of a thin flat lobe hanging over and concealing the gall-bladder.

The gall-bladder itself may become the seat of an accumulation of pus, serum, bile or mucous; or it may shrink to a degree that nearly or quite obliterates its lumen. Similar changes may take place in the ducts.

Hardly less injurious for the patient's health may be adhesions to neighboring organs. Fibrinous peritonitis with following adhesions is the most common sequel of gallstone disease. Such adhesions may take place between any of the adjacent organs. Sometimes there will be ulcerations from gallstones, and if no protective peritonitis encapsulates these parts of the peritoneal cavity, fulminant peritonitis may supervene. But usually adhesions have taken place, and gallstones find their way into many unsuspected places. They have been known to be evacuated through a bronchus, through the stomach by vomiting, through the skin; gallstones have even been found in the pelvis of kidney (Mayo-Robson). It will not surprise us to learn that they have found their way into the liver, the pancreas, or into the bowel. It has even been claimed that they have descended into the pelvic organs of women, but Curvoisier, who copies the case from the original report, does not admit the validity of the author's conclusions.

It is hardly necessary to point out that the possibility of ulcerations into other organs gives an additional indication for operative interference, when the diagnosis of gallstone is made, and the medicinal treatment shows itself futile.

There is a certain analogy between the development of our knowledge of diseases connected with the vermiform process and those of the gall-bladder. It was only after we had begun to open the abdomen during attacks of inflammation in the iliac region, that we got an insight into the pathology of all these diseases near the cecum, and became enabled to consider them in one comprehensive view. So it is with the diseases of the biliary system; we did not, and could not, have a clear perception of their nature, mode of progress, complications and final effects before we, so to speak, by laparatomies, had surprised nature in her work. We have been enabled to see the effects of stones as inflammations and ulcerations in and around the gall-bladder; we have learned that the attack of colic is only an incident in the history of gallstone disease. That the slow action on the bladder and the adjacent organs by the daily increments produces far greater results than the more cataclysmal attacks of colic. Painful as such an attack is, it rarely kills, while the inflammatory processes lead to adhesions, twists, strictures and ulcerations that are more dangerous to life, because they interfere with the physiological functions of vital organs.

The diagnosis of stone in the bladder is sometimes comparatively easy, at other times extremely difficult. When a person has the classical symptoms of biliary colic, followed by jaundice, when a tumor can be felt in the region of the gall-bladder, when that region is markedly tender upon pressure, then the diagnosis may be considered as reasonably certain. Has there besides passed stones by rectum, or have they by ulcerating found their way to other organs, or out through the abdominal wall, the diagnosis may seem absolute. But often there is none of these symptoms present, and yet the bladder may be the receptacle of stones.

Indeed as long as the stones remain quiet in the gall-bladder there is neither colic, jaundice nor swelling; as indicated, there is sometimes absolutely no symptom of illness, at other times vague sensations that may come from disease in any part of the digestive system. Even when the sufferings become more marked we may be in the greatest doubt, whether we face a case of cholelithiasis, or, for instance, some gastric disorder, or some disease in kidneys, vertebræ or abdomen.

The most common group of such deceptive cases are probably those of stones in the kidney. It is said that the urine will give the desired information and that the absence of morbid products from the kidney in the urine excludes renal calculi. But this is not so; I have

had two cases where there were characteristic attacks with tenderness in the right hypochondrium, where the urine was normal and where there were no gallstones, but kidney stones.

In one of these cases stones could be felt through the emaciated abdominal walls. There was a stony-hard tumor in which I even succeeded in eliciting crepitus. An accomplished medical friend saw the case with me, and concurred in the diagnosis of gallstone. Great was my astonishment to find upon operation that the mass of stones was in the kidney; the urine was normal because all of it was secreted from the healthy kidney.

The other case was one seen with a prominent physician from Iowa. In this case repeated examination both chemically and by the microscope failed to discover any anomaly of the urine. There had been several attacks of colic, and the whole complex of symptoms pointed to cholelithiasis. No stone was found in the bladder, but some months after the operation the patient had a new attack of colic preceded and accompanied by frequent desire to urinate. I do not know if morbid products were found in the urine at that time, but I suppose that the attacks were owing to renal calculi.

Nearly every condition in the abdomen that produces colic may mimic gallstone disease. Gastric ulcers give rise to pains that often are severe and protracted enough to suggest biliary colic; the differential points will largely be the tenderness on point pressure in the region of the stomach, the association of the increase of pain with taking of food, the rapid emaciation; if hematemesis takes place, the diagnosis is, of course, clear.

Gastric ulcers will most commonly be found on the left side of the median line, the gall-bladder on the right; but both may be on the opposite of the usual one. The colic produced by a stricture of the bowel must be remembered in making the differential diagnosis; such strictures may be owing to infiltrating tumors in the intestinal wall, or to adhesions from previous peritonitis. In many of these it will be possible to see the peristaltic wave above the point of constriction; the history will usually help in establishing a diagnosis. Subphrenic abscesses, diseases of the pancreas, colic from indigestion must be remembered, as well as neuroses—all these conditions may be confounded with biliary colic.

Perhaps one of the commonest mistakes is to confound inflammation of the vermiform appendix with biliary colic. It is said that the locality of tenderness is decisive; but the gall-bladder may be displaced downwards, or the inflammation produced by the appendix may concentrate itself upwards. The history of the case will give valuable information. It is certainly very rare that the severe pain of appendicitis lasts as long as an attack of biliary colic, and if it does it will produce a more general peritonitis.

Another condition that may lead to severe colics is the presence of omental hernia in the linea alba. These ruptures are usually small and apt to be overlooked by physicians who are not familiar with them and who fail to recognize the connection between the colics and these small protrusions.

Conditions outside of the abdomen may also be misleading. It is a well known fact that tuberculous inflammation of the vertebræ may occasion very severe pain that comes in attacks of great severity, apparently without external cause; there will in the beginning of such a disease be no deformity, no pain on pressure, no stiffness of the back. To make the similarity yet more deceptive, these attacks may come on in the night, just as gallstone colic is apt to do; probably from some change of position in bed, while the patient is asleep. When the disease has progressed further and the characteristic symptoms of tuberculous spondylitis have appeared the diagnosis is simple enough; but in the earlier stages it may be very difficult.

Suppose we have progressed far enough in our diagnosis to have fixed the responsibility for the symptoms upon the biliary passages; we have yet to decide whether we have to do with concrements or other diseases.

Occasionally we meet with phlegmonous inflammation of the gall-bladder; this disease is usually speedily fatal, but may terminate in an encapsulated pus collection in the gall-bladder, and around it. If the case is seen early, before a general peritonitis has developed, it can be diagnosticated from appendicitis by its locality; the point of tenderness will be at the tip of the tenth rib, but when general peritonitis has set in it may be impossible to distinguish it from appendicitis, rupture of the gall-bladder from a stone, or from the results of a perforating duodenal ulcer. Rare as the disease just mentioned is, it will probably often be misin-

terpreted; a previous infectious disease should lead us to consider its possibility, as it always is the result of septic embolism. Much more common will be the confusion of stone with malignant disease of the biliary passages; in fact we often find a combination of the two conditions as above indicated.

Even after opening the abdomen the surgeon may be misled. It has twice happened to me that inflammations from stones have produced such hard adhesions around the biliary passages that I did not dare to go through from fear that I had a malignant neoplasm, and contented myself with loosening other adhesions that interfered with the free action of neighboring viscera. In both cases the patients recovered, although the concrements that probably were present were not removed. One of the patients was a man past fifty, who, besides attacks of colic, had suffered from the symptoms of dilatation of the stomach, demonstrated by physical examination and the removal of large masses of fermenting stomach contents by means of the stomach tube. At the operation there were found adhesions of the pyloric portion of the stomach, with the liver; these were separated, but an indurated mass of almost stony hardness was found over the region of the common duct. This man lives yet, four years after the operation, and enjoys good health. It is somewhat humiliating to make such mistakes, but fortunately in these two cases they had no evil results for the patients.

After the diagnosis of gallstones is made, it becomes of importance to decide where the stones are. If there has been no jaundice, the stones are most apt to be in the gall-bladder, or in the cystic duct. But if jaundice has followed an attack, it may be difficult to decide whether the jaundice is due to the temporary passage of a stone through the common duct, to the permanent lodgment of a stone there, or to an obstructive catarrh.

If the jaundice is deep, protracted and repeats itself, it is fairly certain that we have to do with a stone in the common duct; as Dr. Fenger of Chicago has demonstrated, gallstones in the common duct are apt to have a somewhat dilated portion of the duct behind them; the stone acts as a ball valve and leads to obstruction; after a while it settles back in the dilated portion, and the occlusion is temporarily overcome. If the jaundice is slight and of short duration, it may have been produced by a catarrh accompanying the colic, and making the common duct impervious, as we see in catarrhal obstruction of the nose from a so-called cold.

In other cases again the passage of a small stone through the common duct may block it for a while, either by its mechanical presence before it has passed through the papilla, or by setting up an inflammation in the duct, with swelling of its mucous membrane.

It is evident that the obstruction of the common duct by a neighboring tumor, an enlarged gland, a carcinoma at the papilla, will give rise to a jaundice that may be difficult to distinguish from that produced by a fixed stone. The age of the individual, the history of the case, and the amount of the cachexia present, may be valuable points in the diagnosis.

But in many cases I suspect that even the most skillful diagnostician will have to be content with the diagnosis of simple biliary obstruction, without being able to say what its cause is.

The indications for various operations upon the biliary system are determined by the special condition, and the prognosis of the surgical interference depends upon the special form of the gallstone disease in the very highest degree. Concrements that are confined to the gall-bladder ought to be removed almost without a death, while interference with the deeper portions will entail a mortality that is quite serious.

A carcinoma gives, of course, an absolutely fatal prognosis, and operations in cancerous individuals should not be performed. For at most a brief relief may be obtained; usually the issue is fatal. This is not only bad for the case in hand, but the impression spreads among the public, and even the physicians, that surgical interference with the biliary system is very dangerous; the effect of this is to deprive people from availing themselves of the blessings of the operation in the earlier stages of gallstone disease, where there is no practical danger.

I wish therefore to protest against operations in individuals suffering from cancer in the biliary system. Persons subject to obesity, or far advanced in years, or suffering from complications with phthisis, heart disease, nephritis or arterio-sclerosis, should not be considered as fit subjects for operation. Let

them stay under the care of their family physicians, let them go to springs or be treated medicinally in other ways.

Our diagnosis must not rest with the decision that gallstones are present, we must distinguish between at least four different conditions:

(1) Stones in gall-bladder with open cystic ducts. In such cases we are most apt to make mistakes, but such cases are just the ones where operations are most beneficial and least dangerous, and therefore most certainly indicated.

(2) Inflammation of the gall-bladder, empyema, hydrops. Here the diagnosis will not be very difficult.

(3) Adhesions and interference with the functions of neighboring organs. A very difficult diagnosis.

(4) Obstruction of the common duct.

Only in the last group of cases, can we expect jaundice; but it is not even present in all these cases. When the diagnosis of stones in the gall-bladder is made, it would seem the most natural procedure to open the gall-bladder, remove the stones, sew up the wound, and drop the gall-bladder into the abdomen. This operation, cystendysis, has been performed a number of times, but in spite of its obvious simplicity, it was not the first operation employed for the removal of stones, nor has it become very popular with experienced operators. It suffers from three very manifest defects, either of which must prevent its employment, except in cases where no other operation is feasible. The first objection is, that even after opening the gall-bladder and removing stones, nobody can tell if they are all removed, especially from the cystic duct. The inexperienced might think it an easy matter to determine whether all stones are removed or not, but this is not the case. Let it be enough to quote the statement of Dr. Hans Kehr of Halberstadt, Germany, who has probably more experience than anybody else in gallstone surgery:

"No surgeon, no matter how skillful as an operator, or how accurate an examiner he may be, can be absolutely sure that he has removed all stones."

The second objection to this operation is that the gall-bladder is left without drainage and that the diseased condition of its mucous membrane is left without any treatment, while if drainage is established, this process is in itself curative of the various disorders.

The third objection is of less weight than the two previous ones, because it may be overcome by technical skill. But still it is serious enough; that is, the possibility of bursting of the suture or of contamination of peritoneum. In fact I know from published records of five cases in which this took place.

We see thus that this cystendysis, or opening, suturing and dropping the gall-bladder, an operation comparable to the modern ovariotamy with intraperitoneal dropping of the pedicle, is an operation that has many weak points. Should it consequently be abandoned? Is it unnecessary for the operator to be acquainted with it? Has it no justification in any case? So seems indeed to be the opinion of some of the most prominent operators, but there may be cases where it perhaps should be chosen as the least of evils.

When the small size of the gall-bladder, or its depth, or its situation deep in the abdomen behind an overlapping lobe of the liver makes it impossible to perform cystostomy, or where inflammatory adhesions to the liver make cystectomy dangerous, cystendysis, or opening and removal of stones followed by suture of the wound in the bladder and dropping, may be considered justifiable.

The first operation by which gallstones were removed was not the outcome of a skillfully planned and executed surgical process, but the result of a mistaken diagnosis. In this case the walls of the gall-bladder were sewed into the wound of the abdomen, after it had been opened and a few dozen gallstones had been removed. The patient recovered, but it took about ten years before any surgeon acted upon the suggestion of this case, and started out with the definite plan of creating a fistulous opening between the gall-bladder and the surface of the body. This operation has got the name of cystostomy, and must be considered as the standard operation for stones in the bladder or cystic duct.

Two methods have been used; one consists in first producing an adhesion of the gall-bladder to the peritoneum, awaiting the establishment of firm adhesions, and then opening the gall-bladder, removing the stones, and establishing a biliary fistula. This operation, called cystostomy in two stages, has found its main advocate in Riedel of Jena, who

has performed it many times and never lost a patient from it. Great as his success has been, and widely as his fame has spread, he has met a formidable rival in Dr. Hans Kehr, whom I have already mentioned. Dr. Kehr also considers cystostomy the best operation for stones in the gall-bladder in ordinary cases, but performs the operation in one session. He does not admit the greater safety of Riedel's operation, and his results are just as good. If they would be just as good in the hands of the average operator may, however, be questionable.

Before criticising these competing operations it may be well to discuss the operation of cystostomy in its general bearings.

The advantages gained by sewing the wound of the bladder in the lips of the peritoneal wound are manifest. In the first place, it puts the gall-bladder outside of the peritoneal cavity.

Whatever comes out of the gall-bladder is by an accurate and trustworthy suture prevented from getting into the peritoneal cavity. The impossibility of ever being certain that all stones, including cystic ones, are really removed, seems to condemn every operation that does not leave an outlet for overlooked concrements. Furthermore, the mucous membrane of a gall-bladder that harbors a stone is never healthy, and we know of no more certain cure than drainage.

The objection has been raised that the fistula may be permanent and the patient thus may become burdened by a lasting defect. There are two reasons for the permanence of the fistula. One is a technical mistake—that of putting the gall-bladder on the stretch by a too low opening. A proper location of the fistula will sufficiently prevent this accident.

The other cause is some obstruction in the cystic or common duct. In this case the fistula is far from being a detriment, it is a safety valve. It seems perfectly clear that the objections to a temporary fistula are invalid. If a fistula should refuse to close, secondary operations, such as removal of deepseated stones, the correction of twists or removal of adhesions, have in Dr. Kehr's hands always accomplished final closure.

What are the grounds upon which Dr. Kehr rejects the apparently safer operation in two stages? He claims, and as it seems with perfect reason, that the operation in two stages prevents a careful examination of the whole gall apparatus; he lays the greatest stress upon the necessity of carefully examining the cystic duct, the choledochous, and the head of the pancreas. He empties the gall-bladder by means of an aspirator, and makes very long incision in the gall-bladder, and is thus enabled to examine the cystic duct as well as the other ducts.

Nobody can deny the great importance of this examination, whereby it becomes possible to perform a complete removal of all stones in many cases, where otherwise a stone would be left.

With great care and the necessary technical skill the operation is not more dangerous than the operation in two stages.

The operation for gallstones will never become the common property of every doctor; it is too full of unexpected complications, and in many cases too difficult for surgeons without special experience in this special branch. In experienced and skillful hands the operation in one stage is as safe as in two, and it ought not to be intrusted to others.

The operative method in all cases of cystostomy seems now to have become tolerably uniform. The incision is preferably made in the vertical axis of the body, through the right rectus muscle. Lawson Tait, who was one of the earliest operators and who has performed a large number of cystostomies, seems to have chosen the outside of the rectus muscle; Mr. Tait's reports suffer, however, all from a certain incompleteness, which detracts somewhat from their usefulness. The French operators have followed the same practice. The Germans have usually made the opening through the muscle, separating the fibres longitudinally and by blunt dissection.

Mayo Robson says, "As a rule the aponeurosis in the semilunar line is divided, but if the rectus be wide, its fibres may be separated." He seems to think that a scar through muscle is less resistant than one through fibrous tissue. This is not so; a hernia is more apt to develop through the linea alba or semilunaris than through the rectus muscle.

After reaching the gall-bladder, those who operate in two stages have, after as careful palpation as possible, sewed the bladder to the detached and reflected peritoneal and fascial flaps; the suture material is now mostly silk; catgut is not quite substantial enough; one

operator used silver suture with a result which might have been foreseen.

Mayo Robson uses chromic catgut. This is in so far an advantage, as silk sutures have frequently formed the nucleus for secondary stones (Dr. Kehr; Sammlung Kl. Vortr. No. 225, p. 14), but with proper care the sutures can all be removed, so that this danger ought to be eliminated.

The immediate opening and suturing of the gall-bladder demands great care in preventing the escape of bladder contents into the peritoneal cavity; this is done by Kehr by aspirating before incision, and by all operators by packing the cavity with aseptic gauze sponges.

It will usually be found that the gall-bladder has contracted adhesions with neighboring organs. These adhesions must be carefully separated; they are often the immediate cause of the patient's illhealth, and in two of my own cases, where I did not dare to complete the operation, the loosening of the adhesions relieved the patients from their sufferings. The process producing adhesions around the bladder, the pericystitis, is a continuation of the inflammation in the bladder, of the mucous membrane primarily, then of the deeper layers of the wall, leading to various pathological changes of the bladder, such as ulcerations and contractions. The gall-bladder is sometimes shriveled up to such an extent that the operation of cystostomy becomes impossible, and yet stones may be present in the shrunken organ.

It has been suggested in such cases to open the bladder and unite it with a bowel, cysto-enterostomy. This operation enables the bile to get into the bowel, and prevents a biliary fistula. There may be cases, where it has to be performed, when a cystostomy is impossible, and where removal of the gall-bladder by Langenbuch's operation, cystectomy, seems too dangerous.

The operation of cystectomy will first call for our consideration. Langenbuch performed the first operation in 1882; it was successful, and was repeated by its author four times before he found any imitators in this apparently audacious operation.

In the beginning the surgeons of Germany looked upon it somewhat suspiciously; Riedel and Kehr did not like it; but lately the tide has turned and Kehr is a strong advocate of it.

The gall-bladder is an organ which can be removed without serious injury to the individual, a fact that seemed probable from its absence in many animals. That it could be removed from animals was proved by experiments before Langenbuch showed that men could live without a gall-bladder. The operation may, however, be very difficult of execution, namely on account of firm adhesions to the liver. In dissection serious hemorrhage may be met with; every operator knows what that means in such a deep locality.

The hemorrhages have been controlled in various ways, by continuous pressure with aseptic sponges, by the use of the thermo-cautery, or by buried sutures. Another difficulty in the operation may be in getting at a free part of the cystic duct; this must of course be carefully ligated, and perhaps sutured, for a leakage of bile would otherwise take place into the peritoneal cavity. It seems that the danger from this source is real, as even Kehr has lost a case through failure of the ligature of the duct. And yet Kehr, who originally was one of the adversaries of the operation, has become an enthusiastic convert to it, having at last report performed it sixty-nine times with three deaths.

The indications for cystetomy become daily broader, and although I have never performed the operation, I am certain that I ought to have done so in a case I lost, because of the poor condition of the wall of the gall-bladder, that prevented absolute firmness of the suture.

The next time that I meet a case where I suspect that the peritoneal suture may be defective, I shall not hesitate to excise the gall-bladder if feasible.

The method of operation does not differ from that of other operations on the biliary system. The incision in the abdominal wall may have to be somewhat larger; a transverse incision may have to be added to the longitudinal one, otherwise no modification is necessary.

The isolation of the cystic duct may be difficult, and the ligature must be made with great care. I should like to turn the ends of the stump in, and sew the serous membrane over the stump; if the stump is long enough, it ought to be fixed in the abdominal wound, but usually I suppose that it will be too short and have to be dropped. The under surface of the liver must be lined with sterile gauze, which must be led out, above the stump. This is apt to produce a large and yielding scar, and to be

followed by a hernia; to offset this possible disadvantage relapses are excluded, as the stone-forming organ is removed. It is a significant fact that cystectomy is gaining in favor, and that the most prominent operators perform it oftener now than formerly.

Where the problem presented to the operator is to provide an outlet for bile, that cannot pass the common duct, it can be met in two ways: either by establishing an opening between gall-bladder and skin, whereby a permanent bile fistula is created, or by connecting the gall-bladder with the bowel.

If the obstruction in the choledochous duct is a stone, it ought to be removed; if it is a tumor, the operation can be only palliative, and the less risky operation would seem the preferable one.

Among the indications established by Dr. Murphy of Chicago for cysto-enterostomy, are the following:

1. When it is desirable to drain the gall-bladder for accumulations.
2. When the choledochous duct is closed.
3. When the bladder is inflamed, drainage of the gall-bladder by a cystostomy looks more rational, as there is danger of infection of the bladder from the bowel; when the choledochous duct is closed, it ought to be made patent by operation, if a concrement is the cause of obstruction; if a malignant tumor is the cause, the mortality of the operation has been so high in every other operator's hands that its justifiability is questionable. (Mayo Robson.)

If after a cystostomy a permanent fistula remains from stricture or obstruction of the choledochous duct, and this cannot otherwise be relieved, then the operation of cysto-enterostomy is indicated.

After having considered the operations on the gall-bladder, it remains to describe and criticise the operations on the ducts.

Stones in the cystic duct can usually be pressed back into the bladder; sometimes they can be caught by a scoop, sometimes squeezed; in other cases their removal is impossible by these means. If the bladder is large, it is often possible to reach the duct, and to incise it; Kehr advises under such circumstances to sew it to the peritoneal flaps, to perform cysticostomy. I have never seen this operation performed; with a shrunken gall-bladder, the depth in which the operation will have to be done must often make it impossible; if it is possible it is indicated; with the establishment of drainage the inflammation of the cystic duct will become more open and the stone may finally find its way out. Several such cases have been reported by Riedel.

If the stones are in the choledochous duct they may be removed by choledochotomy. This operation has been carefully studied and described by Fenger. I have performed two successful operations myself. The great danger of the operation does not consist in the difficulty of accurate suturing; with due exercise of patience and skill that can be done safely; but the operation is dangerous from the risk of wounding important bloodvessels.

It would carry this paper too far if the anatomy of the common duct were considered in detail; only this much must be stated, that the portal vein is to the right of the duct, and that branches to it cross its upper and middle portion; incision must therefore be made in its lower portion.

Dr. Kehr gives the very important direction that operations on the common duct should not ordinarily be performed during an acute attack of inflammation in it. Under such circumstances a stone may have passed from the bladder, and as it must be of moderate size, there is a hope that it may pass. The gall-bladder contains usually a number of stones and is in a condition of severe inflammation. If cystostomy is performed, the bile will flow out of the fistula and the stones remain in the common duct.

On the other hand, repeated attacks of icterus that indicate a floating stone in the duct, as Fenger has demonstrated, demand surgical interference. The same holds good if the acute attack becomes complicated by rigors, high fever, rapid pulse and tenderness of the liver; then we may conclude that we have a beginning cholangeitis, and a drainage of the hepatic duct is the only method that holds out any hope. As far as I know Kehr is the only one who has undertaken it.

While most of the operations on the gall-bladder are simple, and cystostomy practically devoid of danger, the operations on the ducts are both complicated and difficult. As they usually are demanded in cases of long standing, where the inflammatory processes have involved the neighboring organs, we may have to perform other operations at the same time, thus exposing the peritoneal cavity more than by a

shorter operation, and also increasing the danger of the narcosis. From these conditions it is very evident that we ought to discriminate between the various kinds of gallstone operations.

It is of the greatest importance for the sufferers from gallstones that they should be operated early before the concrements have descended into the ducts, and before they have produced destructive inflammations in adjacent organs.

To accomplish this the following conditions must be fulfilled:

1. Physicians must learn to diagnosticate gallstone disease. That the knowledge of this disease is not as extensive and accurate as it might be, is among other things deducible from the fact that many doctors believe that colics are not from gallstones, except when accompanied by jaundice; while the fact is that only a relatively small percentage show this discoloration.

2. The public must be educated to secure early operative relief, and to understand the difference between the simple and the complicated cases.

3. Surgeons must as far as possible exclude malignant cases from their operating list. The deaths following them will by doctors and the public be charged to the general account of operations on the gall-system, instead of to the account of operations on malignant tumors.

4. Operations on the biliary system should only be undertaken by surgeons who have made special studies of the subject.

LOCOMOTOR ATAXIA.

A decided improvement in a case of locomotor ataxia is noted by James C. Wilson (Int. Med. Mag., N.Y., March), where the patient was administered the double chlorid of gold and sodium, together with rest. One-twentieth of a grain of the mixture was given three times a day. The case was a sailor thirty-three years old, with no important family history, and had been under observation for about a year and a half. Some ten or twelve years ago the patient had shooting pains in the thighs, and also girdle pains. These pains continued until he came under notice, though treated several times for rheumatism. As a result of the treatment he felt better and is encouraged; his sensations, his gait, and certain functions are on the gain. The doctor thinks it quite worth while to try treatment of the kind, especially with the drug mentioned, particularly in the early stages of the disease.

FIBROID OF THE LEFT VOCAL BAND.

By B. M. BEHRENS, M. D., Minneapolis, Minn.

J. M. S., 32 years of age, school teacher, noticed about two years ago a beginning hoarseness, which became specially aggravating after taking "cold."

The patient is of robust health with no family history. Has always been well and but for this increasing hoarseness, which now has assumed such proportions that he is compelled to give up school work, complains of nothing except a disposition to take cold easily. Also, as instructor in singing, his larynx is overtaxed every day and in the evening he is quite worn out and scarcely able to talk above a whisper.

The cause of this is illustrated in the accompanying cut, which shows a fibroid occupying the middle part of the left vocal band on a broad basis and white as the band itself. The general injection of the whole larynx head

gives also to the tumor and the vocal band a flush of redness particularly conspicuous at its base and very marked after the least exertion of the larynx muscles. The nostrils, nasopharynx and pharynx in a state of congestion, but nowhere hypertrophies to any appreciable extent.

The improvement of these parts under treatment did not benefit the condition of the larynx, and the galvano-cautery was resorted to in order to thoroughly remove the tumor, which was effected in three sittings. On account of the irritability of the fauces the preliminary manipulation with the larynx probe had to be practiced more than a week daily, and even then I had often to shut off the current, when just on the point, on account of reflex spasms that would entirely remove from view both the tumor and the cautery point. Under such difficulties it affords us some consolation to know that a general improvement of

the whole upper air tract at least will effect a cessation of the growth, if not a reduction of it, what possibly might have taken place also in this case if left to itself.

With the assurance that he would recover his voice entirely, the patient was permitted to go home—Wisconsin—before the vocal band had healed up again, and a few days later I received a letter in which he told me that the voice was entirely gone. As the patient could not or would not come back to Minneapolis for an examination, I had to await developments. Only after six weeks did the patient present himself fully recovered and voice perfect.

The reason for my reporting this case is that complete aphonia set in, although the trauma, which caused paralysis of the adductor muscles, was one-sided, the rule being that the unaffected side partly makes up for this, and the voice is preserved to some extent. As I did not get the opportunity of examining the case in its aphonic state nor could convince myself of the extent of the aphonia, which patients often are apt to exaggerate, it stands to reason, that the trauma to twigs of the recurrent nerve has caused a complete paralysis of the adductor muscles on the left side.

TO ABORT A COLD.

Max Nassauer asserts that an incipient cold in the head can be checked every time if the nose is thoroughly rinsed out with a weak solution of potassium permanganate, which seems to have a specific action upon the germs causing the trouble. He claims that the public will have a higher respect for the profession when it is proved that colds can be successfully aborted by following the physician's directions. He checks colds in the first hour or so, and thus escapes all the catarrhal and bronchial annoyance that follows in their train. He has a strong solution of potassium permanganate on hand: about what can be taken up on the tip of a small knife, to half a liter water. A few drops of this strong solution are added to warm water until it is colored a pale pink. After blowing the nose vigorously, both nostrils are rinsed out well with this weak solution, allowing the fluid to run out through the other nostril and through the mouth. Each nostril is then wiped out with cotton on the finger to mechanically remove all remaining germs. A small dry plug of cotton is then pushed well up into each nostril and the nostrils filled with the weak solution, with the head held back, allowing the cotton to soak it up. The cotton is left undisturbed for about an hour, for the warmth and moisture to produce their effects, when the plugs are expelled by blowing the nose. Even an established cold is favorably influenced by this treatment, but is most effective when the sneezing, tickling and increased secretions announce the advent of the cold, which he considers a highly contagious infection.—(Klin. Therap. Woch., January.)—Jour. Miss. Med. Ass'n.

TREATMENT OF ACUTE COCAINE POISONING.

If the poison has been swallowed the stomach syphon-tube should be at once applied and the contents of the organ evacuated. The patient should be placed in the horizontal position on his back. Tannic acid, iodine, or charcoal may be given as possible chemical antidotes. Stallard advises the stimulation of respiration and circulation by flicking the chest and face with hot and cold towels, as in opium poisoning; but I cannot say that I have seen benefit from this practice unless it has been done lightly and occasionally for a minute or two. Ammonia or ether, inhaled, drunk by the mouth, or introduced into the rectum, or administered hypodermically, is useful, as also is the administration of caffeine or coffee. The addition of small quantities of alcohol, in the form of five to ten-drop doses of tincturæ cardamom, comp., spirit of chloroform, or tincturæ lavandulæ comp. (separate or combined), is sometimes serviceable when coffee cannot be easily taken. Chloroform may be inhaled to relieve the spasm. Strychnine, in minute doses, 1/100 grain, with or without a couple of drops or so of tincture of digitalis, is also of value. Some authors report apparent benefit from intravenous injection of normal saline solution; but I think caution is requisite, owing to the risk of embolism in the lungs.

When the blood-pressure has been raised or there is alarming respiratory spasm, a drop-dose of nitroglycerin, at intervals of half an hour if required, sometimes acts excellently. Clifford Allbutt says that the inhalation of oxygen and artificial respiration against the asphyxia may be indicated. I have found sips of hot water, and, where this could not be taken by the mouth on account of insensibility or collapse, hot water enemata, of three to four ounces, of substantial aid. External applications, as hot as can be borne, such as a bottle, or jar, or tin filled with hot water and covered with flannel to protect the skin, I make it a rule always to apply, especially in unconsciousness, and, indeed, almost from the first.—Sajous' Annual and Analytical Cyclopedia of Practical Medicine, Vol. II., Page 324.

At quiz in senior chemistry: Dr. Morris:—"From what source is gallic acid obtained?"

Matlock, promptly:—"From gall stones, Professor."—University Medical, Galveston.

THE MEDICAL DIAL

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MAY, 1899.

THE COMING LIGHT.

To Nikola Tesla the world seems indebted for the latest improvement in artificial light. From the burning pine pitch-knot to the "tallow dip" was an immense stride in safety, convenience and quality and quantity of illumination, and from the tallow dip to the gas from coal conveyed through the streets and buildings in pipes ready for instant use at all times was a still greater achievement; but when the electric current was arrested in its course by a slender carbon filament, and made to glow with the intensity of sunlight, the height of our ambition in lighting was thought to have been reached. But now comes the Tesla method in furnishing "artificial daylight," which certainly claims our admiration for its present and prospective usefulness. If the cost can be kept within reasonable limits it will indeed prove the "coming light" for all purposes of illumination. Tesla calls it "vacuum tube lighting by high frequency currents"; he explains the process as follows: "The tubes (glass) have had all the air pumped out, but, of course, are full of ether. The passage of this special current sets the ether in motion, forming light waves. The light differs from arc illumination in that it has no particular centre; the whole tube glows and sheds a radiance like daylight all around."

The tubes can be made of any length of less than a yard, and when lighted do not dazzle the eyes by their brilliancy or sputter and vibrate in waves of light like the burning carbon pencils of the arc light. The tubes do not heat up with the light, one great advantage over the present electric incandescent globe, and they do not burn out and become useless as those with filaments often do, thus requiring renewal at considerable expense. The wiring for this light is essentially the same as that used at present for incandescent lamps, and the fixtures already in place will answer; but a different dynamo has been prepared for economy.

Already this process has passed the experimental stage, and contracts have been made with New York business houses for lighting them with this latest triumph of science in artificial illumination; and so far as we can now judge it appears to meet every demand for a satisfactory light. This is the third addition to our recent scientific knowledge, which seems to be already equipped for practical usefulness. With liquid air for refrigerating our beef for the army, a telephone without connecting wires, and artificial daylight, we may rest for a while without anxiously asking what next?

DISEASES OF THE AGED.

One of the saddest commentaries on the medicine of the past can truthfully be said to be the neglect of the aged—for we are to-day without a single comprehensive treatise on the changes peculiar to age, much less the diseases of advanced life. Indeed it was not until the dawn of the present century that old age received the slightest scientific consideration. Prior to the beginning of the century those who wrote upon the subject wrote like Cicero from a contemplative literary standpoint.

Our surprise increases as we scan the literature of the profession to find volume after volume and journal after journal devoted to diseases of children, while scarcely a systematic treatise on the diseases of old age is to be found. The past want of interest as indicated by the scanty and fragmentary character of the

literature on the subject is largely responsible for the present apathy in the profession as well as in our medical schools.

The medical student passes the college curriculum hearing scarcely a reference made to the changes peculiar to age, and having little opportunity to become familiar with the maladies to which old people are subject.

The writer scarcely recalls a reference to old age, during his college days, unless suggested in mitigation of the failure of some brilliantly planned but misguided operation or equally ill-timed drug treatment.

Of late increasing interest is being shown in this much neglected subject. Dr. W. A. Hollis, in an able article in the London Lancet, Jan. 21st, 1899, entitled, "Do We Age More Rapidly than Our Forbears," presents some interesting facts.

Dr. J. Althaus, in the same journal, under the title of "Old Age and Rejuvenescence," offers food for reflection.

In commendation of the "Twentieth Century Practice of Medicine," be it remembered that it was the first of our many excellent works on practice to add a chapter on old age and its diseases.

Has not the time arrived for a decided revolution in medical teaching in the direction of special instruction in the changes and diseases of advanced life?

The writer would not urge the addition of another distinct course to the already overcrowded college curriculum, but would suggest that the necessary instruction be given by the chair of Paediatrics—the student having first received from the chairs of Anatomy and Physiology the necessary primary instruction bearing on the normal changes peculiar to age.

The importance of this knowledge to the general practitioner in his daily work is so vital that further delay on the part of the medical colleges in supplying the necessary didactic and clinical instruction would seem unwarranted. J. W. B.

No doubt many of the physicians of the Northwest are making preparations to attend the meeting of the American Medical Association, which convenes in the city of Columbus, Ohio, on June 6, and continues for four days. Many interesting orations have already been announced for the occasion, but it is safe to say that there are others that have not as yet been mentioned in print that will be received as heartily as those already mentioned. It will undoubtedly be the most interesting congress of physicians that has ever gathered since the organization of the association, and every physician who can should attend, and thus obtain a pleasing respite from the ever arduous labors of a continuous practice, and at the same time gather from the social contact and from the formal session such choice crumbs as will hereafter be of service.

A recent attempt to fasten the tentacles of osteopathy upon the state of Nebraska met with defeat at the hands of the state senate. There was an even dozen in that august body who allied their forces with the osteopaths and voted to amend the laws to allow them to practice in the state, while there were sixteen stalwarts who gave the proposition their unqualified disapproval.

From the New York Medical Journal it is noted that Dr. Prince A. Morrow, of 66 West Fortieth street, New York City, wishes to obtain complete statistics of leprosy in this country, to be incorporated in a report on the subject. He respectfully requests any physician who has personal knowledge of a case or cases to communicate the facts to him within thirty days. Such information will be duly credited, and, if desired, the name and any circumstances which might lead to the identity of the leper will be strictly confidential.

The profession at large, especially of the west, have lost a valued and respected colaborer in the death of Dr. John H. Etheridge, secretary and one of the inspiring spirits of Rush Medical College, Chicago. The Doctor was well known throughout the country, and much was expected of him, and much was always given, whenever the occasion demanded that he should act or that his voice should be heard.

A fifty-thousand-dollar addition to the Winnipeg General Hospital will be erected soon, and the necessary funds have already been raised. The citizens of that enterprising city are pleased to style the new building the "jubilee addition."

Thirty-five instructors have already been selected for the Cornell University summer medical courses in New York city, which begin the season May 1 and close August 1.

Reports of Societies.

THE HENNEPIN COUNTY MEDICAL SOCIETY

Held its monthly meeting at the Public Library, Minneapolis, April 3, 1899, Dr. Nippert, President, in the chair; Dr. Knights, Secretary.

Dr. Lester W. Day was proposed for membership.

Dr. Sweetser exhibited an appendix which had been removed after the fifth attack, and which was the seat of an ulcer that had advanced almost to perforation.

Dr. Knut Hoegh read a paper on Gall Bladder Diseases. See page 159, The Medical Dial.

DISCUSSION.

Dr. J. W. Macdonald considered the paper a scientific and very practical one. The difficulties in diagonsis were almost insurmountable. The classical symptoms of gall stones were in some cases readily interpreted, in others they were very misleading. For instance, pain was often referred to a distant part of the body, and he referred to a case in which all pain was referred to the region of the spleen. The patient gave a history of severe attacks of vomiting with the formation of a painful tumor on the left side. After a few days of suffering and the vomiting of large quantities of what was supposed to be pus, the tumor subsided. There was no pain over the gall bladder when the patient came under observation, but great tenderness and enlargement of the spleen. The history of the case led to the belief that the disease was an abscess of the spleen opening by way of the gastro-splenic omentum into the stomach. On operating, however, the spleen was found to be healthy, but the gall bladder contained three calculi.

Jaundice was an indication that a stone was blocking up the hepatic or common duct, while the absence of jaundice was evidence that the stone was in the gall bladder or the cystic duct. There was one exception to this rule, and that was when a stone in the cystic duct pressed upon the common or hepatic duct with sufficient force to cause obstruction. At times it was exceedingly difficult to distinguish between gall stones and stone in the kidneys, or even between an enlarged gall bladder and a floating kidney.

There were cases again in which all symptoms of gall stones were manifested, but on operating, adhesions around the gall bladder were numerous, while no stones could be found in the gall bladder or the ducts. The presence of adhesions, however, was evidence that the gall bladder had at one time contained stones, and the breaking up of the adhesions generally resulted in a cure.

Dr. J. E. Moore believed it more reasonable to consider cancer as the cause of gall stones, instead of gall stones the cause of cancer. The operation of dropping the sutured bladder into the abdomen is the ideal one, but he thought it safer to close the bladder, stitching it into the abdominal wound. Black silk suture, he considered the best. It should be left long for ease of removal. The difference of diagnosis was illustrated in a case which came under his observation and was supposed to be floating kidney. There was no biliary colic, the temperature was 99, and examination under anæsthesia had not given positive evidence. The gall bladder was surrounded by adherent omentum containing twelve large stones and fifteen smaller ones.

Dr. Dunsmoor thought the paper an original one. He believed that fistula does not always depend on the way in which the gall bladder is stitched to the wound. He had crushed stones in situ and did not stitch the gall bladder to the wound. He thought stones were generally formed in the liver and cited a case in support of this belief. Old people are not promising cases, but should not be denied operation. He thought the operation could be done in one stage, if carefully performed. He had fair results with Lembert sutures. The nozzle of a syringe is useful in washing out stones from the ducts.

Dr. Weston thought that palpation of the ducts for stones was not always possible. An incision parallel to the ribs gave the best view of the parts and was not liable to be followed by hernia. A sand-bag under the back of the patient is of great aid in securing a better view. Adhesions around the gall bladder are often found without stones being present and freeing these adhesions produces cure. He cited the case of a lady 68 years of age. For the last eight months before March she had no trouble. She then had attacks of pain with jaundice, but the operation was deferred. Chills and vomiting came on, and the operation was undertaken; the gall bladder was inflamed and obliterated. There was an abscess cavity which was walled off by peritoneal adhesions, and one stone was found which had facets. The patient died.

Dr. Dunn was convinced that carcinoma contraindicated operation. He considered cystostomy the best operation; as a rule he does not see any reason for the operation in two stages, as nothing is gained and much lost. Errors in diagnosis are common. Stones are probably formed in the gall bladder in most cases. He had used the Murphy button in two cases of cholecystenterostomy; one was successful, the other partly so.

Dr. Hunter drew attention to cases in which there was contraction of the gall bladder and adhesions from chronic gall-stone diseases, and stated the possibility of making a diagnosis of cases in which the gall stone had disapeared,

leaving the adhesions only. He mentioned the fact that certain localities furnished a large number of cases of gall stone. Strasburg is such a place, and he cited this as an argument against the theory, that the disease is of bacterial origin. The question of how early and how late we may operate he considered of great importance and had seen it somewhere stated we should not operate on a case in which the time of coagulability of the blood was beyond six minutes. Dr. Hoegh closed the discussion.

AMERICAN MEDICAL ASSOCIATION.

Office of the Permanent Secretary,
1400 Pine St., Philadelphia.

The fiftieth annual session will be held in Columbus, Ohio, on Tuesday, Wednesday, Thursday and Friday, June 6, 7, 8 and 9, commencing on Tuesday, at 11 a. m.

"The delegates shall receive their appointment from permanently organized State Medical Societies, and such County and District Medical Societies as are recognized by representation in their respective State Societies, and from the Medical Departments of the Army, Navy and Marine-Hospital Service of the United States.

"Each State, County and District Medical Society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: Provided, however, that the number of delegates for any particular state, territory, county, city or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

Members by Application.—Members by application shall consist of such members of the State, County and District Medical Societies entitled to representation in this Association, as shall make application in writing to the Treasurer, and accompany said application with a certificate of good standing, signed by the President and Secretary of the Society of which they are members, and the amount of the annual membership fee, $5.00. They shall have their names upon the roll, and have all the rights and privileges accorded to permanent members, and shall retain their membership upon the same terms.

At a recent meeting of this Association, the following was unanimously adopted:

Whereas, The American Medical Association did, at Detroit, in 1892, unanimously resolve to demand of all the medical colleges of the United States the adoption and observance of a standard of requirements of all candidates for the degree of doctor of medicine which should in no manner fall below the minimum standard of the Association of American Medical Colleges; and

Whereas, This demand was sent officially by the Permanent Secretary to the deans of every medical college in the United States and to every medical journal in the United States, now, therefore, the American Medical Association gives notice that hereafter no professor or other teacher in, nor any graduate of, any medical college in the United States, which shall, after January 1, 1899, confer the degree of doctor of medicine or receive such degree on any conditions below the published standard of the Association of American Medical Colleges, will be allowed to register as either delegate or permanent member of his Association.

ORATIONS.

On Medicine.—James C. Wilson, Philadelphia.

On Surgery.—Floyd W. McRae, Atlanta, Ga.

On State Medicine.—Daniel R. Brower, Chicago.

Chairman Committee of Arrangements.—Starling Loving, Columbus.

OFFICERS OF SECTIONS.

Practice of Medicine.—Frank Billings, Chicago, Chairman; Carroll E. Edson, Denver, Secretary.

Surgery and Anatomy.—W. J. Mayo, Rochester, Minn., Chairman; M. L. Harris, Chicago, Secretary.

Obstetrics and Diseases of Women.—A. H. Cordier, Kansas City, Mo., Chairman; W. D. Haggard, Jr., Nashville, Tenn., Secretary.

Materia Medica, Pharmacy and Therapeutics.—Thomas H. Stucky, Louisville, Ky., Chairman; Leon L. Solomon, Louisville, Ky., Secretary.

Ophthalmology.—Casey A. Wood, Chicago, Chairman; Charles H. Williams, Boston, Secretary.

Laryngology and Otology.—Emil Mayer, New York, Chairman; Christian R. Holmes, Cincinnati, Secretary.

Diseases of Children.—Henry E. Tuley, Louisville, Ky., Chairman; L. D. Boogher, St. Louis, Secretary.

Physiology and Dietetics.—J. Weir, Jr., Owensboro, Ky., Chairman; Lee Kahn, Leadville, Colo., Secretary.

Neurology and Medical Jurisprudence.—Frederick Peterson, New York, Chairman; Hugh T. Patrick, Chicago, Secretary.

Cutaneous Medicine and Surgery.—W. T. Corlett, Cleveland, Ohio, Chairman; J. M. Blaine, Denver, Colo., Secretary.

State Medicine.—Arthur R. Reynolds, Chicago, Chairman; W. P. Munn, Denver, Colo., Secretary.

Stomatology.—George V. I. Brown, Milwaukee, Wis., Chairman; Eugene S. Talbot, Chicago, Secretary.

Wm. B. Atkinson,
Permanent Secretary.

Progress of Medicine.

SURGERY.

UNDER THE CHARGE OF
J. H. DUNN, M. D., W. A. HALL, M. D.
KNUT HOEGH, M. D.

THE USE OF CALCINED BONE IN BONE REPAIR.

Martini (Il., Policlinico, Aug. 15, 1898) compares the results of his experiments with calcined and decalcified bone in repairing bone cavities. The former material was prepared by calcining in a crucible pieces of the epiphysis of the heifer's tibia, the latter by treating similar pieces of bone by 10 per cent hydrochloric acid. Both materials were then preserved in alcoholic solutions, 1 to 500 corrosive sublimate. The author concludes from his evidently careful experiments on rabbits with both materials, that calcined bone is much the best material for the repair of bone cavities. 1—It supplies salts of lime to the osteogenetic tissue; 2—it is easily prepared, preserved and rendered sterile by heat; 3—it is easily adapted to the cavity and its porosity favors bony invasion. J. H. D.

Luys (Bulletins de la Société Anat. de Paris) reports a fatal intestinal obstruction from a large uterine fibroid which had become twisted on its pedicle and pressed upon and flattened out the sigmoid flexure. The patient was a woman aged 57, who entered the hospital with great abdominal distension and symptoms of intestinal obstruction, but died while preparations for opening the abdomen were under way. At the autopsy no other cause of obstruction or death could be found. J. H. D.

Faber (These de Lyon) asserts that intestinal obstruction from torsion of the mesentery is exceedingly uncommon. He finds but nine cases in medical literature, including the case reported. The accident as a rule involves a double strangulation. It may be partial, i. e. when a coil of the small intestine is isolated, but in total torsion of the mesentery the whole jejunum and ilium is isolated and changed to a closed cavity; hence, there is ascitic effusion, absence of fæcal vomiting and circumscribed distension about the umbilicus. When partial mesenteric torsion takes place the coil involved is usually high up the jejunum, and the abdomen is retracted. Obstruction from mesenteric torsion is one of the deadliest of its class, the eight cases which Faber finds in the literature having been all fatal. The abdomen should be early opened and the twist unrolled. Enterostomy is absolutely useless. In partial torsion the strangulated coil must be resected if sloughing. J. H. D.

GYNECOLOGY.

A. W. ABBOTT, M. D., F. A. DUNSMOOR, M. D.
J. H. RISHMILLER, M. D

SUPRAPUBIC HYSTERECTOMY WITH INTRAPERITONEAL TREATMENT OF THE STUMP IN PREGNANCY AT TERM FOR OBSTRUCTED LABOR.

W. M. Polk (Medical Record, March 4th, 1899) discusses this subject, making the reader conscious, as usual, of his accurate and minute observations. Leopold's latest statistics place Caesarean section within the limit of safe operations. Porro's operation, like hysterectomy for fibroids, was originally executed so as to leave the cervical portion of the uterus fixed in the lower angle of the abdominal incision. At present, like other suprapubic hysteroctomies, the stump can be treated intraperitoneally. If we learn to regard the pregnant uterus as a tumor requiring excision and banish the thought that pregnancy adds to the mortality of operations, we have no obstacles in accepting to treat the stump from Porro's operation intraperitoneally.

One of the most interesting chapters of modern surgery relates to this conquest. For example: A patient after the birth of the seventh child developed a cystic kidney on the right side. The kidney and enlarging uterus caused so much pain in a subsequent gestation that the kidney was removed at the sixth month. The kidney neoplasm was as large as the uterus, and crowded well up beneath the floating ribs, and in turn crowded the uterus downward and to the left. The operation, the convalescence from it, the subsequent course of the case of labor, labor itself, and its convalescence, were uneventful. The offspring is now two years old and suffered no harm.

The second instance was a young married woman, sterile, and who insisted on relief. An ovarian tumor, three and one-half inches in diameter, had a bearing upon the issue; therefore, its removal by the abdominal section was suggested. While considering this advice the patient nullified it by becoming pregnant. Now another phase of the situation presented itself, the possible influence of the tumor causing abortion; or its probable interference with delivery. Removal was again advised. This suggestion was accepted and a dermoid cyst rid the patient of a dangerous growth. The patient made a good recovery from the operation and finally was delivered with untoward complications.

The Porro operation is presented to us as a necessary measure or as one of election. As a measure of necessity the author states that

we are faced by dire complications, such as osteomalacia, a ruptured uterus, a septic uterus, uncontrollable hemorrhage and extensive uterine fibroma, especially of the lower uterine segment, and large enough to encroach upon the line of delivery. In all these conditions extirpation is the proper remedy. Caesarean section and symphyseotomy may be presented as alternatives. The point favoring Caesarean section is the avoidance of mutilation. It is more dangerous than extirpation, because the operation deals with a surface more fragile and more liable to sepsis. Leakage of virulent poison into the peritoneal cavity generally means death. Time consumed in operating and the amount of shock involved are practically the same. The question, then, is narrowed down to mutilation versus safety, and the less skillful the operator the greater the preponderance of safety on the side of extirpation.

In comparison with symphyseotomy the contrast can only apply to those greater degrees of contraction to which symphyseotomy is adapted. The author casts his vote for extirpation and with all the greater alacrity the poorer the operator. It requires more skill to properly and successfully perform symphyseotomy, eviscerate and remove a child from such a pelvis than it does to deliver a living child and extirpate the uterus from above.

DETAILS OF OPERATION.

There are present conditions which give the operator joy, such as elongation of the vagina which places the uterus well out of the pelvis and affords easy access for amputation. Likewise in pregnancy the vessels are enlarged and can be readily reached; the peritoneum is loosely attached and can easily be separated while the ureters, though drawn upwards, are proportionally less so than the cervix. The uterus is emptied after it has been turned outside the abdominal cavity. Time is saved by tearing asunder the uterus, first cutting an opening to admit two or three fingers, choosing for the incision the median line commencing at the fundus. Any troublesome hemorrhage is checked at once by an elastic ligature thrown about the uterus below the rent. Then the uterus is removed. After ligating the uterine vessels and cutting away the uterine superstructure it is easy to invert the stump and from the direction of the vagina seize and draw down the stump and with T-shaped clamps, or ordinary hæmostatic forceps control all bleeding. This secures a clean peritoneal cavity and enables the operator to close the coeliotomy wound.

Case 1. Emergency hospital. The condition demanding the operation was a deformed pelvis (osteomalacia). Deformity affected mainly the right half of the pelvis; there were narrowing of the arch and an encroachment of the acetabulum upon the pelvic cavity. Transverse diameter midway the canal measured two and one-half inches; antero-posterior, three inches. When operated upon the patient had been in labor seventy-two hours. Child weighed five and three-quarters pounds. Mother and child made excellent recoveries.

Case 2. J. V., aged twenty-nine years; had been pregnant once before, and delivery was accomplished by means of embryotomy performed at term. Cervix was almost obliterated, and what remained appeared to be composed chiefly of cicatricial tissue. Free incision of the extensive cicatricial cervix being essential to such a delivery, the author determined in favor of abdominal section. The vagina was so greatly elongated as to place the utero-vaginal juncture well above the pelvis so that all that remained of the cervix was removed along with the body of the uterus. Recovery was somewhat slow, due to the development of inflammatory exudate about the ligature controlling the vessels on the right side. This finally disappeared, and the patient left the hospital in excellent condition. The child thrived well, although fed artificially.

J. H. R.

OBSTETRICS.

A. B. CATES, A. M., M. D. R. E. CUTTS, B. S., M. D.

ON THE OCCURRENCE AND SIGNIFICANCE OF POST-NATAL TRANSFUSION.

Rudolf Köstling (Brit. Gyn. Jr., Feb., '99) understands by post-natal transfusion that it is the blood which passes from the placenta to the fœtus after birth. Köstling reports his own investigations and also collected the literature on the subject. These researches were in regard to the change in weight of the child from the time it was born until the cord was cut and also determining the amount of blood which flowed away when the cord was immediately severed. This increase in weight in primipara, when the cord was allowed to remain until pulsations ceased, varied from 0 to 130 g. in primipara and from 0 to 80 in multipara.

If the cord was severed immediately after delivery he collected from it weights varying from 10 to 152 g. in primipara and from 5 to 115 g. in multipara. As to the cause of post-natal transfusion he ascribes the contractions of the uterus which force the blood from it into the placenta and so leads to transfusion. He cannot confirm the statement that children whose cords are cut early have an inferior appearance and general condition; however, he thinks that children whose cords are severed

late have a decided advantage. He considers that pulsation should have ceased in the cord before division, but thinks that Crede's grip, the elevation of the placenta and the stroking down of the cord, are superfluous. R. E. C.

ECLAMPSIA.

M. Bar (Univ. Med. Mag., Vol. XI, No. 6) proposes to call puerperal eclampsia without convulsions by the name of eclampism.

In eclampsia convulsions greatly aggravate the prognosis of the preconvulsive condition, but the author contends that there are many cases which have no convulsions, but, instead, may have intense neuralgia, nausea, diarrhœa, albumen, œdema, and other symptoms of eclampsia; such cases may prove speedily fatal. Cases are reported which had prodromes of eclampsia, but no convulsions which quickly terminated by death. Autopsy revealed characteristic lesions of kidneys and ecchymotic spots.

Patients may be in a true state of eclampsia from self-intoxication without having a convulsive attack. Bar wishes to emphasize the fact that while, generally speaking, convulsions are characteristic of eclampsia, they are simply one of the many symptoms and may, like any other symptom, be absent in self-intoxication.

R. E. C.

TREATMENT OF POST-PARTUM HEMORRHAGE.

Bastian (Brit. Med. Journal No. 1992) advocates a method of plugging the vagina, which he considers effective in all cases. The cervix is seized with forceps and pulled down as far as for any gynecological operation. Hermetic closure of the cervical canal by one or more pairs of strong pressure forceps closing the external os is good practice. Both these procedures have the great disadvantage of being applicable to cases of inertia only and are useless in post-partum hemorrhage from such causes as deep lacerations of the vagina or cervix or ruptured varicose veins. Plugging the vagina, as usually practiced without assistance, is useless.

In Bastian's method a Cusco bivalve speculum is introduced into the vagina, the blades, which should be about five and one-half inches long, are opened as widely as possible, thus bringing the cervix plainly into view. Sterilized or iodoform gauze is then introduced, great care being taken to pack firmly against the cervix and cul-de-sac. The uterus is carried into the abdomen by the packing, and the plugging is continued until the vagina is filled. The speculum is left in position for 12 hours and the packing for 24 hours. The author thinks the woman is so safe as to require no special attention after the packing is performed. The mechanism is complex. If the hemorrhage is vaginal, one of the valves of the speculum will compress the bleeding part, and the stretching of the vaginal wall is an indirect aid. If the hemorrhage is from the cervix the direct pressure from the packing will check it; also check it indirectly by pressure on the uterine arteries in the base of the broad ligaments and also due to the stretching of the parts by elevating the uterus. If from inertia the last named mechanism is equally effective closing the cervix as well as forceps. An intra-uterine clot then forms and causes the uterus to contract. R. E. C.

PEDIATRICS.

UNDER THE CHARGE OF

H. B. SWEETSER, M. D. J. P. BARBER, M. D.

THE MANAGEMENT OF THE FEVER OF PNEUMONIA.

A very useful and practical debate on this subject has recently been held in the Section of Pediatrics of the New York Academy of Medicine, and is reported in the Medical News of November 19, 1898.

Chapin thinks that in our management of hyperpyrexia the first point is to avoid any measures that will secondarily have a bad effect, and thus hinder future chances of recovery. All depressing remedies come under this head, as, for example, most of the coal-tar derivatives. The only exception to this rule is the occasional administration of small doses of phenacetine in sthenic cases where there is pain and nervous restlessness. Cardiac stimulants, such as caffiene or camphor, are always added. When very high temperature keeps recurring, however, this remedy is not to be continued. Antipyrin, and especially acetanilid, should not be given under any circumstances. It is sometimes a great temptation to give these preparations, as they are easily taken and usually have a prompt if only temporary effect.

The application of water is on the whole the safest and most satisfactory method of controlling dangerous hyperpyrexia. Much may be accomplished by a thorough application of cold to the head. This not only reduces the temperature, but relieves to a certain extent its deleterious effect on the brain and nervous system. In order to be effectual the cold to the head must be thoroughly and continuously applied. The ordinary method of applying cool cloths is not sufficient. Finely cracked ice placed in bladders, from which the surplus air is expelled, may be molded around the head, especially at the vertex and occiput. Chapin has found ice poultices, made by mixing finely cracked ice with flaxseed meal in oiled silk, placed around and on top of the head, to be most valuable. By this

means a steady application of cold can be conveniently applied. If this is not accomplished, the next resource is the application of compresses directly to the chest.

The child is stripped, wrapped in a blanket, and placed upon a table. A stimulant is given and the feet are placed in contact with hot bottles. A compress sufficiently large to surround the chest is plunged into water at a temperature of from 70 degrees to 95 degrees F., and applied to the chest. This is changed every ten or fifteen minutes until the desired result is obtained. In order to disturb the child as little as possible, the nurse is directed to apply the compress from the front, tucking in the ends until they meet in the back, in this way avoiding much movement or inconvenience to the child. The exact temperature of the water in a given case must be determined by the condition of the child, and the temperature to be combated. A needless amount of cold is often employed.

If the temperature is 105 degrees F., the water may be 95 degrees F., or even warmer, at the start. A frequent application of the compresses will often produce results at this comparatively high temperature. If the compresses are allowed to remain unchanged, they become warm and the effect is lost.

If the temperature does not yield, the temperature of the water can be lowered until it reaches 70 degrees F., 60 degrees F., or even lower. It requires some careful watching to determine exactly how low the temperature of the water may be kept. The addition of about one-fourth part of alcohol sometimes increases the value of these compresses. This was well exemplified in a case recently under the author's care. An infant fifteen months old, with an extensive bronchopneumonia had a temperature ranging from 104 degrees F., to 105 degrees F. As the symptoms were somewhat urgent, the infant twitching as in beginning convulsions, a compress at 60 degrees F. was applied about the chest. The child became slightly cyanotic under the compress, without much reduction of temperature. It was then removed and stimulants given. The following day compresses at 70 degrees F., with the addition of one-fourth alcohol, were applied, and the child reacted well to this treatment. The temperature soon dropped to 102 degrees F.

So long as the feet and hands are kept warm the cool compresses may be applied, but chilliness of these parts is a contraindication to cold. When the temperature is reduced to 102 degrees or 103 degrees F., the compresses should not be renewed, but are kept in position in case the temperature ascends again to an unsafe degree. In the meantime they act in the same way as a cotton-batting jacket. Chapin has sometimes kept a child in this position for several days, applying cold when indicated by a hyperpyrexia which tends to recur. This clinical fact is probably explained by a mixed infection, and not the pneumococcus alone, being responsible for the disease. Wide variations in the temperature point to the former condition.

The deepened respirations ensuing upon the application of the compresses have a favorable effect upon the pneumonic circulation. As a rule children do not object to the compresses when applied in the manner here suggested, the principal point being to avoid too great a degree of cold and to apply the compresses with as little disturbance as possible to the child, keeping the extremities warm.

Although Chapin has occasionally employed the tub, he rarely uses this method now in combating hyperpyrexia. The fright of the child and the exhaustion which accompanies the tubbing contraindicate is use, He believes that all the good effects which may be obtained by the use of the tub may be had by a proper use of cool compresses.

In case of cyanotic children, with prostration and hyperpyrexia, he has employed the warm bath (100 degrees F.) with friction of the surface with good results.

Continuing the debate, Holt spoke of the treatment of pneumonia in very young children. By way of summary, he lays stress upon the following points in the treatment of pneumonia in this class of patients:

No depleting measures are ever admissible.

Hygienic treatment, including fresh air, proper feeding and intelligent care, is of the utmost importance.

No unnecessary medication should be permitted.

Many annoying symptoms may be relieved by local treatment, such as the cough by inhalations, pain by counter-irritation, restlessness by the ice-cap or sponging.

Stimulants should be deferred until demanded by the condition of the pulse.

High temperature is much more safely and effectively controlled by the use of cold than by drugs.

Greater caution is necessary in the use of powerful stimulants than is generally observed.

Rest is quite as important as in other serious diseases.

Dr. Simon Baruch next discussed the value of hydrotherapy in the pneumonia of children. He said that the short time at his disposal would not permit him to offer more than a general outline of the hydriatic procedures which he had found useful, and to inculcate the necessity of using each with due regard to its rationale. In children under three years, the tub bath with continuous friction is most useful. If the body temperature is between 101 degrees and 103 degrees F. a tub is placed upon two chairs, near the bed, and half filled with water at 95 degrees F.; and the child is

gently submerged and held by pressing the fingers upon one shoulder (not upon the chest). Ice water is now added, without being allowed to touch the child's body, until 85 degrees F. is reached; friction over the entire body is maintained for five minutes.

This is a good initiatory procedure; it may be repeated every four to six hours with advantage so long as the temperature does not fall below 101 degrees F. When the body is above 103 degrees F. the water bath may be reduced to 80 degrees F., very rarely lower, and never so low as some bath temperatures mentioned. The duration should be prolonged to eight minutes; in this event it requires repetition every four hours. In the intervals between the baths a compress, covering the entire anterior part of the trunk (the entire trunk is better) consisting of three folds of old linen or a towel (without fringes) wrung more or less out of water at 70 degrees F., and secured by a flannel bandage placed around the body, may be applied with advantage every hour when the patient is not asleep. This procedure not only fulfils every indication, but it also renders the demand for bathing less frequent.

When delirium and stupor are present, when cyanosis is pronounced, and cardiac action embarrassed, when the bronchi are clogged with secretions, increasing dyspnea, in these conditions, which are so frequent in bronchopneumonia of children, the full bath may be changed to dips into water at 80 degrees F. or less for a few seconds, repeated two or three times in rapid succession every hour, the temperature, duration, and frequency being in accord with existing conditions. An excellent procedure in these desperate cases is the affusion with basins of water at 60 degrees F. or less, poured over the head and shoulders of the patient, who is held semi-recumbent in a tub containing water at 100 degrees F.

Rapid drying and friction are demanded after these procedures, because the patient's reactive capacity is below par. Body temperature is not an index for the cold affusion, which should be given in these desperate cases even if the temperature is low. We aim to stimulate the central nervous system and thereby improve the circulation, respiration and expectoration. When the child is restless an occasional full bath at 95 degrees F., prolonged for ten minutes, will prove soothing.

In most children over three years of age full baths are too disturbing. A younger child will become quiet as soon as it experiences relief and comfort, while the older child will continue to struggle and scream. Whenever the child is tractable he prefers the full bath, but he insists upon it in every case when other treatment proves inadequate. Having observed that the toxines of pneumonia endow the patient with less resistance to cooling procedures than do the toxines of typhoid fever, he avoids full baths colder than 75 degrees and longer than eight minutes in the former disease. In the management of pneumonia patients larger reductions of the body temperature are not the prime object.

In most children above three years of age the chest compress consisting of three folds of old linen so arranged by slits in the axillary portion as to fit snugly around the chest down to the navel and held in position by a flannel binder, is the most useful procedure. The linen is wrung out of water at 65 degrees to 70 degrees F., more or less thoroughly, according to the temperature and general condition, and the flannel bandage is pinned over it. (Oiled silk, which the nurse will recommend for protection of the bed, counteracts the object of this compress and converts it into a poultice.) It is repeated every hour and discontinued when the temperature reaches 100 degrees F.

These are the simplest and most useful hydriatic procedures in the pneumonia of children. The time limit precludes their more detailed description.

Baruch concluded with a few words of warning to the effect that spontaneous reaction must always be provided for by friction during the bath so that there should be no need for warmth and friction after the bath. Whenever the patient becomes very chilly, with chattering teeth and cyanosed face, we may conclude that the procedure has been faulty and must be modified. A few nights ago Baruch saw a case in consultation with a well-informed practitioner who feared water-treatment because the patient had become cold and cyanotic under a wet pack. Inquiry elicited the fact that the patient had been simply wrapped in a cold, wet sheet (no definite temperature). She was not covered snugly by blankets, as is demanded by the technique of the wet pack in order to promote reaction.

This incident illustrates the importance of correct technique. Reaction is always furthered by rubbing during the procedure, or by protection against evaporation. It may be enhanced, also, by modifying the temperature of the water, not, as is often erroneously done, by elevating it, but by lowering it within reasonable limits, and shortening the procedure. It is a law of hydrotherapeutics that low water temperature, strong mechanical impact, and brief duration, promote reaction. Higher bath temperatures are more agreeable and, if the procedure be prolonged, afford greater temperature reduction, but do not produce the stimulating, antifebrile effect of a correctly adapted cold procedure. J. P. B.

MINISTERIAL HUMOR.

At the close of the forenoon session of a ministerial conference, in announcing the opening subject for the afternoon session, the pre-

siding officer stated that Elder H— would present a paper on "The Devil," and added: "Please be prompt in attendance, for brother H— has a carefully prepared paper, and is full of his subject." Imagine his chagrin when an uproar of laughter reminded him of the unhappy witticism he had blundered into.—Homiletic Review.

Neurology and Psychiatry.

UNDER THE CHARGE OF
R. O. BEARD, M. D., W. A. JONES, M. D.

BIOLOGICAL CONDITIONS OF THE PARENTS OF EPILEPTICS.

The author (Dr. Gaston Bechet, Archives de Neurologie, March, '99) investigated the family history of forty epileptic patients, and compared their statistics with the figures given for normal families in a similar investigation carried on by Ball and Regis.

The results are tabulated under four heads:

I. LONGEVITY.

In the grandparents the length of life was rather greater than that for normal families, showing an average of sixty-nine years for epileptic families against sixty-five years for normal. Of the parents thirty-seven were still living, and the average at death for the remaining forty-two was fifty years. This is well below the average age given for normal families, which is fifty-seven years.

II. FECUNDITY.

The number of children born to the grandparents was considerably larger than for normal families, showing an average of seven and sixty-two one-hundredths to each epileptic family as against four and thirty-eight for the normal. The children born to the parents averaged six and twelve one-hundredths; the number for normal families is not given.

Of these forty epileptics twenty-six were married, and their children showed an average of one and sixteen one-hundredths per family as against a normal average of two and seventy-three one-hundredths.

III. VITALITY.

The vitality of the parents of the epileptics compared favorably with that of normal individuals:

	Dead.	Living.
Parents of epileptics.....	53.16 %	46.83 %
Parents of normal.....	57.5 %	42.5 %

Of the brothers and sisters of the epileptics forty-two per cent had died. The age at which these deaths occurred showed a marked variation from the normal, since eighty-six sixty-five one-hundredths per cent occurred under the age of twenty years, while in normal families but sixty-six sixty-seven one-hundredths per cent of the deaths occur below this age.

IV. DISEASE.

The causes of the 411 deaths which had occurred in the four generations were as follows:

a. Respiratory diseases, 136
(Phthisis, 53, occurring mainly in the ascendants.)
b. Old age, 98
c. Cerebral and spinal diseases, 84
d. Neuroses and insanity, 11

This last figure is in contradiction to the figures of Ball and Regis, who place the frequency of nervous affections next to that of the pulmonary.

The author draws the following conclusions:

1. The longevity among the ascendants is less than that of normal families.
2. The average of births for the families is greater than the normal, but among the individuals epilepsy tends to sterility.
3. The vitality is less in epileptic families, a much larger proportion dying in early years than in normal families.
4. The frequency of the different diseases presents very marked characteristics. Pulmonary troubles (phthisis in particular) are very common among the ascendants; cerebral troubles (meningitis in particular) occur frequently among the descendants. The neuroses and insanity are, according to these investigations, remarkably rare in the families of epileptics. These results confirm the well known opinion of Laseque that epilepsy is not hereditary.

W. A. J.

A CASE OF DISSEMINATED SCLEROSIS WITH UNILATERAL TREMOR.

Tremor more marked on one side (Dr. Paul Remlinger, Revue de Medicine, March, '99) is often seen in Disseminated Sclerosis, but strictly unilateral tremor is exceptional. In fact it is generally admitted that unilateral tremor is hysterical in origin. As an exception to this rule the author records the following case: The patient, a well developed man, and a tailor by trade, first noticed a feeling of fullness and formication in the right upper extremity, which was followed later by steadily increasing tremor. The right lower extremity became involved in the same order, and a year or two later the lower lip showed similar symptoms. The tremor was intentional, and entirely disappeared on rest. While plainly marked on the right side, there was absolutely no tremor even on fatigue on the left side. Careful measurements and tests showed entire absence of atrophy, muscular weakness, or disorder of sensation on the affected side. Hysteria was absolutely excluded after failure to find any of

the ordinary stigmata. Other symptoms present were exaggeration of the tendon reflexes on both sides, but more markedly so on the right; considerable diminution of the keenness of vision, due to optic neuritis; and a very slow, drawling and monotonous speech. When last seen, nearly six years after the beginning of the trouble, the patient was beginning to complain of a sense of fullness in the left arm, and it is possible that tremor will eventually appear on the left side. W. A. J.

MOTOR PATHS IN THE BRAIN AND CORD OF THE MONKEY.

Minute portions of the cortex were removed by Dr. Linden Mellus (Nerv. and Ment. Dis., April, '99) from the motor areas of the brain, after which the animals were allowed to live from ten to forty days. The movement controlled by the portion removed was, in each case, determined by faradic excitation.

In most cases the removal of so small a portion of the cortex, generally from 2 to 4 mm. square, was followed by no apparent disturbance of function, but the resulting degeneration was in some cases surprisingly large. Although an effort was made to have the area removed always of about the same size, the number of degenerated fibers varied largely in the different animals.

The largest fibers were found following lesions in the highest portion of the brain, in the part governing movements of the great toe, and the finest fibers in the portion just anterior to the lower extremity of the fissure of Rolando, where is situated the center for laryngeal movements. This gradual decrease in the size of the axis cylinders from above downward would seem to correspond to a similar decrease in the size of the pyramidal cells, as well as to bear some relation to the length of the axones.

The degeneration of what may be called association fibers following all these lesions was very considerable. They were all subcortical, as it was impossible to trace any degeneration within the substance of the cortex. In many cases, especially when the lesion was near the fissure of Rolando, these subcortical association fibers were particularly numerous passing under that fissure, connecting the cortex of the ascending frontal with that of the ascending parietal convolution.

Lesions of the ascending frontal convolution were very likely to give rise to some degeneration in the frontal gyri. Occasionally evidences of slight degeneration were found in the temporo-sphenoidal lobe and in the convolutions of the internal surface, but never in the occipital lobe. In all cases scattered degenerated fibers crossed in the middle third of the corpus callosum to be distributed to the convolutions of the opposite hemisphere.

Proceeding inward or downward from the lesion, there was in each case a tract of blackened fibers consisting sometimes of both coarse and fine fibers, and sometimes of only very fine fibers. In passing through the centrum ovale on the way to the internal capsule these fibers became more or less scattered, and were not again found as a distinct and separate bundle, but were always more or less mixed in with the healthy fibers.

In the upper levels of the internal capsule, fibers coming from the lesions in the upper portions of the convexity, as leg and upper arm areas, were found in the posterior half, while fibers from lesions lower down on the convexity, as hand or facial areas, were in the anterior half. On the other hand, in the lower levels of the internal capsule all the degenerated pyramidal fibers coming from lesions in this series of experiments, facial as well as lower limb fibers, were found well within the limits of the middle third of the posterior limb. If this arrangement holds good in the human brain, damage to fibers in the anterior portion of the capsule or about the genu, if in the upper levels would give rise to facial paresis; while small lesions a few mm. lower would be quite as likely to affect the upper or lower limb.

A large proportion of the finer fibers coming from these lesions passed from the posterior limb of the internal capsule into the thalamus, into which many of them could be followed for some distance. That these fibers are not collaterals given off by the pyramidal fibers as they passed through the capsule is shown by the fact that the fine degeneration in the capsule disappeared in proportion to the amount of degeneration passing into the thalamus.

After lesion of the hallux center the tract of degeneration was considerably diminished by the passage of fibers, mostly fine, into the optic thalamus. In the crus the remaining degenerated fibers were situated in the middle third. Here many passed from the dorsal border into the substantia nigra, where they shortly disappeared. The remaining fibers passed on through the pons and medulla, scattered over the entire cross-section of the left pyramidal tract. At the decussation of the pyramids the tract clearly divided, the majority of the degenerated fibers crossing to the lateral column of the same side. Some blackened fibers clearly remained in the left anterior columns. None of these fibers were observed to decussate. Occasional fibers could be traced for some distance toward the anterior horn cells. Throughout the lumbar enlargement fine fibers were found leaving the crossed tract, and they could be followed across the middle line into the gray matter of the opposite side.

The degeneration after lesion of the thumb center was always less than of the hallux center, and consisted of finer fibers. In the crus they lay to the outer third, and the passage of

fibers to the substantia nigra was much more extensive, and in some cases complete, so that below the crus no degenerated fibers could be found. In those cases in which degeneration could be traced on through the pons and medulla, the numbers of these fibers grew constantly less, and although single blackened fibers could be found leaving the pyramidal tract, they soon disappeared and their destination could not be demonstrated. In consideration of the proximity of the facial area to these lesions, it is altogether probable that some cells connected with the facial nucleus were destroyed.

After lesions of the facial center the distribution of degenerated fibers to the large cells of the pons was most noteworthy. In no case could a blackened fiber be shown to run into the nucleus or to come in contact with a motor cell. This of course would be impossible unless the fiber retained its medullary sheath to its termination. W. A. J.

THE TOXICITY OF THE BLOOD IN EPILEPSY.

The author (Dr. P. Cololian, Archives de Neurologie, March, '99) gives an account of seventeen experiments made upon mice and rabbits with the blood from epileptics, taken both before the attack, immediately after it and during the intermission. These observations lead the author to the conclusion that the blood of epileptics is always somewhat more toxic than that of a normal person, but is more markedly so immediately after the attack.

These results are in direct opposition to the similar experiments made by Mariet and Vires, who decided that the blood of epileptics was less toxic than that of normal people.

Cololian reasserts the long-acknowledged fact that the cerebral predisposition, whether hereditary or acquired, is the determining factor, without which the toxicity would be powerless to cause the convulsions. W. A. J.

CLINICAL MICROSCOPY.

UNDER THE CHARGE OF

J. FRANK CORBETT, M. D., G. D. HEAD, M. D.

Osler, in the March number of the Am. Jour. of Med. Sciences, gives the results of a blood study of five cases of Trichinosis as follows:

Case I. White cells, 17,000; eosinophiles, 37%.

Case II. White cells, 13,000; eosinophiles, 44%.

Case III. White cells, 34,000; eosinophiles, 45%.

Case IV. White cells, 18,000; eosinophiles, 48%.

Case V. White cells, 14,000; eosinophiles, 22–36%.

In every case a microscopical study of portions of muscle revealed the presence of trichinæ.

It is a rather significant fact that in all the cases, except case I., the white blood count and the high percentage of eosinophiles directed the clinician to the correct diagnosis.

In two cases typhoid fever was suspected, but the pronounced leucocytosis contra-indicated this diagnosis, and upon further investigation the true nature of the disease was discovered.

In one case malarial fever seemed the most probable diagnosis in the beginning, but the absence of the amœba in the blood, the presence of leucocytosis, and the large percentage of eosinophiles, pointed the way to a correct conclusion.

The high percentage of eosinophile leucocytes in the blood of all the cases is most remarkable.

A larger series of cases of Trichinosis with records of white blood counts and eosinophile estimations is much to be desired.

G. D. H.

INFLUENZA BACILLUS.

Bacteriological examination of a case supposed to be one of pneumococcus infection revealed the fact that about ninety-five per cent. of the micro-organisms in the smears were influenza bacilli. This is interesting when contrasted with two other cases giving symptoms of influenza, in one of which streptococci were found and in the other pneumococci, but no influenza bacilli. The latter were easily obtained from the infected lungs by streaking an agar plate first with blood from the rabbit and then with the exudate. From the sputa it is more difficult, and at least half a dozen plates should be made. The colonies are about half the size of those of the pneumococcus and were exceedingly faint. These bacilli grow in hæmoglobin or blood and occasionally make threads. They grow only at fairly high temperatures, and do not produce septicæmia in animals. They were not stained by Gram. As a rule, these bacilli do not grow at all secondarily without blood, and never to any extent.

A fair guess at the identity can be made from the large number of small bacilli present rather than from the grouping. No observer could absolutely distinguish the influenza bacilli in the sputum alone. These bacilli grow best in pigeon's or rabbit's blood, and very little hæmoglobin was required. Sterilized horse's blood had also given fair results.—(Dr. W. H. Park, N. Y. Path. Soc.)—Am. Microscopical Journal.

A three-year-old boy referred to his baby brother as "the boy what eats mama."

Hospital Clinics.

ST. BARNABAS HOSPITAL.

Gynecological Clinic by A. W. ABBOTT, M. D.

ALEXANDER'S OPERATION.

Miss F., 28. Anæmic, weak, nervous. Has lost flesh for one and a half years. Is now quite thin. Constipated, sacral pains and leucorrhea quite profuse, and a constant, severe pain under the left breast, which was immediately relieved by the replacement of the uterus a year or more ago. The relief was uninterrupted for six months, when on removal of the pessary, the pain returned and has since persisted.

Examining bimanually, we find that the uterus is completely retroflexed. It can be fully replaced and there are apparently no adhesions. The ovaries are prolapsed and behind the fundus. Cases like this give the most pronounced symptoms, because the ovaries are compressed between the hard body of the uterus and the sacrum. When in their normal position, the ovaries are compressed only by the broad ligament and the bowels, both soft and yielding structures.

Out of the many operations devised for retrodisplacement of the uterus, there are two which have met with the most favor. These are ventro-suspension and shortening of the round ligaments by way of the inguinal canal, called "Alexander's" operation, from the surgeon who devised it.

In ventro-suspension the peritoneum covering the upper part of the fundus is made to adhere to the parietal peritoneum.

In Alexander's operation the round ligaments are sought in the inguinal canal and drawn out enough to hold the uterus forward, and then fastened in the canal.

The advocates of each method have found fault with the other, hernia and interference with pregnancy and labor being the chief objections. In regard to hernia, if either operation is properly done, the danger is practically nil. Theoretically there is less danger in the Alexander operation, because the internal ring and the posterior wall of the canal are not disturbed and the anterior wall is left at least as strong as before operation. In ventral suspension the abdominal wall being divided clear through, a failure of perfect coaptation and union endangers the strength of the wall at that point. Practically, however, the objection does not stand good for either operation if well done.

In regard to the method of suspension, the best authorities differ, many insisting that the interference with labor is due to the attachment being made upon the posterior surface of the uterus, and claiming that all trouble is avoided by making the anterior surface of the uterus the point of suture; while Kelly and others equally insist that precisely the opposite is true and that the posterior surface of the womb should be attached low down upon the abdominal peritoneum.

In view of the unsettled state of opinion among good operators, it must be considered that the best way of doing a suspension is still unknown, and as, from the different points of view, each faction of eminent men regards the other as radically wrong, we must admit that possibly both may be in error. Personally, I regard the shortening of the round ligaments as preferable to any form of ventral suspension, because it approaches more nearly the natural anatomical conditions. The operation is unquestionably more difficult in the majority of cases than suspension. Still as it is at least as safe as the other, this should not stand in the way. Rather we ought to educate ourselves so that we can do it successfully. After a wide experience with this operation, I can strongly recommend it as being safe, not too difficult and above all of accomplishing what we want.

It is universally admitted that it does not interfere with pregnancy or parturition. What I have said applies to cases of retrodisplacement, uncomplicated by adhesions, tubal and ovarian disease, tuberculosis and tumors. When there are simply adhesions, these may be broken up after an opening is made into the peritoneal cavity by an anterior abdominal or posterior vaginal incision. If the anterior abdominal incision is chosen, you are certainly in a very convenient position to complete the operation by a suspension. If any of the other complications exist, I would advise you not to undertake the case, unless you have had a sufficient personal observation of their management to feel confident that you can conduct them successfully.

We now find the spine of the pubis, cut outward, and a little above Pourpart's ligament, two and one-half to three inches, down to the glistening fibres of the external oblique muscles, clamping the branches of the superficial epigastric and external pudic arteries. The external ring now appears as a long narrow triangle, with the apex outward. This we open by dividing the intercolumnar fibres for an inch. We now see the small inguinal branch of the ilio-inguinal nerve and the larger genital branch of the genito-crural. These we push to one side, grasp the contents of the canal between the thumb and forefinger, and in the mass see the white glistening beginning of the ligament. This we carefully separate from the fat and muscle fibres, and with only a little traction find that it begins to run out. We now find that there seems to be a sheath which stops its further progress. This we peel off, letting the cord come out an inch and a half more. This sheath is the peritoneal investment, and as we strip it off, we grasp it with

forceps, so as not to lose it in case the ligament should break. We now introduce a curved needle, threaded with worm gut, through the peritoneal sheath as low as possible, then the ligament; then, while the assistant makes sure that the nerves are not included, the needle is passed through the tendon of the external oblique, fat and skin. With another needle on the other end of the worm gut, we pass through the tendon, fat and skin, of the other side. The ligament has not been cut, and as we tie the sutures, with narrow forceps we push the redundant loop of the ligament into the fat of the mons veneris. The other side we treat in just the same way. I prefer to suture in this way for two reasons: 1st, the nerves are better seen and avoided; 2nd, there is, I am quite certain, less danger of stitch abscess, as in this way the contents of the large hair follicles are not carried down into the track of the needle.

The sutures will be left for twelve to fourteen days, if there is no suppuration.

DOUBLE VULVO-VAGINAL CYSTS.

Mrs. M. Thirty-eight years old. Three children. Two years ago had inflammation in right vulva; six months later the same in the other side. Since then each side has inflamed at intervals up to last fall, when she had an acute inflammation of the right side. This was opened and apparently cured. Since then both sides have increased in size. She has soreness after coitus, frequent smarting and burning in vagina and a constant unpleasant sensation in the parts.

With this patient in the lithotomy position, you can see an unusual protrusion toward the vulval cleft on each side, as if a couple of pigeon eggs had been placed under the skin of the labia. They are not tender, fluctuate but are not very tense. They are cysts of the vulvo-vaginal glands, true retention cysts and contain a glairy, mucoid fluid, and result from the inflammatory closure of their ducts with continued secretion from the gland walls. Each cyst is usually single, but sometimes they are divided by partitions. This case is very unique in that both glands are cystic. Cysts of one side alone or abscess of one or both sides are common enough, but the present condition is so rare that Kelly in his recent work, states that he has seen it only once.

The vulvo-vaginal glands are normally about the size of a white bean, situated opposite the vaginal opening and between the sphincter vaginæ and compressor urethræ muscles. The duct is about one-half inch in length and opens between the hymen and nympha on each side at about the lower margin of the hymen by an orifice that is too small to be seen by the naked eye. They are said to be the analogues of Cowper's glands in the male.

There are two methods of treatment—one by incision and cauterizing with iodine or carbolic acid the inner surface. The other, which is the best, is by complete enucleation and closure of the wound by suture. We will adopt the latter operation. Pushing the cyst outward by a finger in the vagina, I make an incision one inch long down to the cyst and then work around the sides, so as to entirely enucleate it. This we do easily until we come to where the vessels enter, i. e. at the upper and back portion. This we cut across and pinch the little artery that supplies the gland. We now close the wound from below up with two rows of cat gut, the first buried, and cover the whole with iodoform collodion. The same operation we repeat on the other side. If there is no suppuration, the patient can walk about with comfort in a week. If it suppurates, it will also heal, but take a longer time.

CONSERVATIVE SURGERY OF THE ADNEXÆ.

Mrs. S. Twenty-one years old. No children. Miscarriage three years ago. Had gonorrhœa seven years ago; three months ago pelvic peritonitis. Has aortic obstructive and mitral regurgitant murmurs. Heart not enlarged. Urine is normal. Menstruation normal.

She wishes relief from an acute pain in the region of the ovaries upon the slightest exercise. She is nervous, weak and anæmic, but in fairly good flesh.

Examining bimanually we find the uterus longer than usual, and not very movable. On the right side there is a mass as large as a hen's egg, immovable, and studded with nodules. It is elastic, but not fluctuating. The tube is large, feels solid and seems to come out of the mass as though a part of it. The mass is probably a large cystic ovary and the tube one whose walls have been thickened by repeated inflammations. We shall find extensive adhesions. On the left side the tube can hardly be made out, while the ovary is not so large as the right, and is fairly smooth, and not very dense, but is almost as immovable as the right one. We infer therefore that this ovary with the tube is nearly normal, but that it is plastered, as it were, to the broad ligament by adhesions which may also extend back to the sigmoid and rectum.

This patient is in the child-bearing period and married, and while she insists on relief from pain she still, as she expresses it, "wishes to be left a woman."

To lay out a plan of treatment we must have clearly in mind the pathological conditions as we would expect to find them if the abdomen were opened for inspection. We have decided that we have a cystic ovary on the right side. What does a cystic ovary look like and how does it differ from the normal? Instead of being a pinkish grey, and smooth,

it would be white and studded all over with the projecting distended Graffian follicles.

The white color is caused by the condensation of the outer surface by inflammatory deposits (chronic ovaritis), and the follicles are large and distended because they cannot readily burst through this covering and discharge the ovum and blood as happens in the normal ovary. If we cut such an ovary open we find it fairly honeycombed with these retention cysts. If we make a microscopic section through such an ovary we find a good deal of condensed connective tissue throughout the ovary between the follicles as well as on the surface.

The little arteries we would find also with thickened walls and reduced calibre.

The tube on the same side we have found large, solid and adherent to the ovary.

If we could look at this we should find, instead of an open tube with fimbriæ, which can be lifted free from the ovary, a closed ostium, no fimbriæ, and the tube and ovary so cemented that quite a little force is needed to separate them. We might find the tube rounded and clubbed at the end or flattened down on the ovary.

If we stretch such a tube longitudinally, we cannot unfold the convolutions or bends, because they are glued together by adhesions on the peritoneal surfaces.

If we now cut across this tube we might find the lumen actually wider than normal but the walls very much thickened. A microscopic section would find the plicæ very much flattened or thickened or almost absent, but, contrary to what you will often read, the epithelium, though often shortened by compression, is very rarely absent. Contrary also to what is generally understood the lumen of the tubes in chronic salpingitis is almost never obliterated except at the very outer end.

A cross section of the wall also shows an increase of connective tissue between the muscular layers with more or less of round cell infiltration. The adhesions are in strings, sheets or plaques of varying thickness and strength. In some of them blood vessels can be demonstrated.

In accordance with our diagnosis we should find the ovary and tube of the left side normal in color, thickness and density, the tube adherent to the ovary and the ovary adherent below the mesovarian to the broad ligament and its upper surface adherent to the bowel behind. The tube will not be thickened, and if we should separate the adhesion to the ovary, the fimbriated extremity would be found open and we could pass a probe clear through to the uterine end.

With this picture before us we are prepared to consider the treatment intelligently. Twenty years ago these cases were treated by opiates, iodide of potassium, iodine and glycerine applications to the vagina, hot douches and even later by massage and electricity. They were never cured, and only temporarily relieved. Experience has taught us therefore that these measures are worse than useless.

The following surgical operations have been adopted for the relief of these cases:

1st. Through an anterior abdominal incision.

a. Removal of the tubes and ovaries.
b. Removal of the uterus, together with the tubes and ovaries.
c. Removal of only the diseased portions of the ovaries or tubes and insuring the potency of the tubes.

2nd. Through a posterior or anterior vaginal incision, the same procedures have been carried out.

Which of the above courses shall we select for this case? Several points have to be taken into consideration.

1st. Can she take an anæsthetic? Although she has a double heart murmur, the heart action and pulse are good. There is no oedema and the urine is normal. It will therefore probably be safe to give either chloroform or ether.

2nd. While we wish to relieve her of her suffering, we wish to save all organs or parts of organs not hopelessly diseased, provided their retention will not probably lead to future trouble.

3rd. To do this we must operate in a way that will give us the best chance for a thorough inspection of the parts.

4th. We must avoid all possible danger to the patient.

In accordance with our diagnosis we will hope to save all organs, except the right tube and ovary. We may therefore eliminate all of the surgical procedures which contemplate the removal of all of the organs or of both tubes and ovaries, and this brings us to the simple questions: How can we best remove the right ovary and tube, separate all adhesions and restore the left ovary and tube as far as possible to their normal conditions? Which route will be the best, the vaginal or the anterior abdominal?

The vaginal operation is safer from sepsis, less liable to subsequent hernia, and more rapid, but it has the great objection of not giving us a clear field for inspection and thorough, complete technique. This so far overshadows the advantages of the vaginal operation that in my judgment we should unhesitatingly accept the anterior abdominal route in this case.

Having made a three-inch incision low down in the linea alba, we place the patient in the Trendelenberg position, wall off the intestines with gauze, lift up the abdominal wall with a retractor, and find in the first place the adhesions much more dense than we expected. These we carefully separate from below upwhere the finger can be worked down to Doug-

las' sac. We now find the right ovary, a dead white in color, studded with cysts varying in wards, having found a place behind the uterus size from a pea to a hazelnut, and the ovary about three times as large as normal. The tube is thick and solid, and the end clubbed and adherent. The broad ligament is also thickened close to the ovary. We ligate across the broad ligament in sections with cat gut, and remove the ovary and tube.

The left ovary is nearly normal in size and color, and the tube apparently healthy, except that the fimbriæ are plastered down to the ovary. We free these adhesions and turn back a cuff on the tube, fastening with a couple of cat gut sutures. We now mop up the little blood that has oozed into the pelvic cavity, bring the patient to the horizontal position, close the peritoneum with cat gut and the rest of the abdominal wall with worm gut, figure of eight sutures.

Book Notices.

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONER'S INDEX. A Work of Reference for Medical Practitioners.

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Treat's Medical Annual has been before the profession for sixteen years, and has been steadily growing in favor. This, the seventeenth volume, is by no means behind its predecessors.

Every department of Medicine and Surgery has been covered, and the progress of the past year is presented in a condensed form which is invaluable as a work of handy reference. The staff of contributors has been selected from men of eminence in all parts of the world, the literary style is of a high order, and the book is copiously illustrated.

A presentation of the newest and most approved methods of treatment is a strong feature in the book, consequently, it is eminently practical, while its moderate cost places it within the reach of all.

BACTERIOLOGICAL RESEARCHES UPON WHOOPING COUGH.

Dr. Otto Zusch observed twenty-five cases of whooping cough. The micro-organism he found and described is a short bacillus. It did not show any evidence of agglutination in the presence even of undiluted serum from whooping cough cases. While he does not believe that the bacterium he describes can be accepted as the specific etiologic factor, he does not hesitate to offer the following conclusions in support of its specific pathogenic nature: The apparent uniform occurrence of the bacteria in the sputum of whooping cough cases and their non-observance in sputa of a large series of cases of other affections. The pecular correspondence of the bacteriological findings with the clinical course. Furthermore, the experience that the greatest danger of transmission of the disease lies in the catarrhal stadium, i. e., in a stage in which the bacteria are found in the purest state and largest numbers.—Am. Microscopical Journal.

The National Confederation of State Medical Examining and Licensing Boards will hold its next meeting at Columbus, Ohio, June 5, 1899, beginning at 10 o'clock a. m. The following are the officers for the present year: President, William Warren Potter, Buffalo, N. Y.; vice-presidents, E. L. B. Godfrey, Camden, N. J.; William Bailey, Louisville, Ky.; secretary-treasurer, A. Walter Suiter, Herkimer, N. Y. Executive Council—Chairman, Wm. S. Foster, Pittsburg, Pa.; Joseph M. Mathews, Louisville, Ky.; Hugh M. Taylor, Richmond, Va.; W. H. Sanders, Montgomery, Ala.; Charles K. Cole, Helena, Mont. Committee on Minimum Standard of Requirements—Chairman, N. R. Coleman, Columbus, Ohio; Gardner T. Swarts, Providence, R. I.; T. J. Happel, Trenton, Tenn.; Augustus Korndoerfer, Philadelphia, Pa.; W. R. Tipton, Las Vegas, N. M.—Western Med. Review.

A PROPER PROPORTION.

"In Berlin there's one bicycle to every twenty-five persons."

"That's all right; any kind of a rider can easily run over twenty-five persons."—Chicago Record.

Idle Moments.

One of the most common sources of humor for the doctor is the blunders made by people in trying to use medical terms. Every now and then some one tries to let the doctor know how smart he is and how well he is posted on medical subjects. I have an old friend of this sort who likes to be called "Doctor" and imagines he knows a great deal about medicine—in fact he often tells me so. Though a pretty loyal friend of mine, he yet has one trait of character that more learned doctors are often accused of having. About some special diseases he thinks he has made new discoveries and knows more about them than any other man living; believing this, he naturally wants the world to know it. Some time ago, during a severe epidemic of diphtheria, I accidentally overheard him haranguing a little crowd, and this is a sample of what he was saying:

"Now, my friends, these doctors don't seem to understand this 'dipthera' at all. I can give you the facts about it. My friends, it is in the blood! Now then, in the first place, the blood becomes mallerous, and then the whole system gets vicated. Now is the time for action. You must apply your external remedies externally and your internal remedies internally. But, my friends, if it ever settles down onto the mid riff, they are gone as sure as the d—l!"

This same old fellow told me one day when I enquired after his health, that he was feeling a good deal "dilapricated," that he had been suffering with a cold and cough, but he had been doctoring himself and he was now expostulating freely and was feeling better. I have noticed since that some of my own patients get relief in the same way.

A few days ago I was enquiring after a consumptive patient who lives in the country. The man I enquired of is a neighbor of the consumptive. "Oh!" said he, "they say he is doing real well now since he got that incubator thing. It cleans his pipes out splendid." The "incubator thing" was an atomizer.

Cannon Falls, Minn. A. T. Conley.

DIAGNOSIS OF UTERINE CARCINOMA.

(All writers emphasize the importance from a diagnostic point of view, of the occurence of hemorrhage.)

L. G. Baldwin says that the one sign of malignant disease of the uterus which should always be investigated, and especially when it occurs at or near the menopause, is hemorrhage. In some cases the bleeding is caused by coition at a period earlier than that at which any derangement of the menstrual flow is noticed. This is especially true when the disease has its origin in the cervix. Another comparatively early symptom is an inter-menstrual, watery, irritating discharge, not necessarily foul-smelling.

E. J. Ill says that early diagnosis from subjective symptoms belongs to the difficult problems. Exhaustive physical examination is necessary to confirm the suspicion. The ulcerating epithelioma of the cervix is easily known by its distinct, hard edges, the hardness extending somewhat beyond the ulcerating portion. The bottom of the ulcer is remarkably hard, but so friable that a curet will easily remove a large piece. A tenaculum will take no hold in it. Through the speculum it appears as covered by a dirty grayish matter. The ordinary erosion, on the contrary, appears of a red color, has no infiltration of its edges(and is smooth and velvety to the touch. The curet will make little impression on it, except to remove a very superficial layer. The syphilitic ulcer will be recognized by its general symptoms. Carcinoma of the body cannot be diagnosed in its earlier stages by palpation. When carcinoma of the cervical canal exists it will be seen only when the cervix is dilated and the curret removes the friable masses. By palpation the cervix is found enlarged, and hard, deep-seated nodules are felt.—Am. Year Book of Med. and Surgery p. 581.

Delafield divides inflammation of the colon into five forms: the acute catarrhal variety, in which there is an increased production of mucus and serum, but no grave symptoms, and which is of short and favorable course in all except children; the acute purulent form, in which there are signs of septic poisoning and the prognosis is commonly bad; the acute productive, necrotic variety, which is a severe form, the most marked effect being upon the glandular layer of the intestinal wall (this also the last form); the fourth form in which there are patches of false membrane, sometimes with necrosis of the whole wall; and, finally, the amobic form, which is due to infection of the connective-tissue layer by the Amoeba coli. The latter form is often associated with abscess of the liver. In treatment, if the desease is low down, it is best managed by local irrigations; but if high up, it must be treated by drugs by the mouth. Sometimes the two methods are well combined. For irrigation Delafield often uses an infusion of flaxseed, if there is no necrosis; if there is necrosis, he uses 1:10,000 bichlorid, chlorid of zinc, or formalin. In cases situated higher up he uses bismuth and opium, and in persistent cases ipecac in large doses, with small doses of castor oil, silver nitrate, salol, or naphtholin.—Am. Year Book of Med. and Surgery, 1899, p. 191.

The Journal of Tuberculosis, a quarterly, published by A. H. McQuilkin at Ashville, N. C., has made its appearance. Karl Von Ruck is the editor of the new venture. It "is a beginning toward what is hoped to be the gradual establishment of a representative publication of American endeavor and progress in dealing with the prevention and cure of tuberculosis," says their salutatory.

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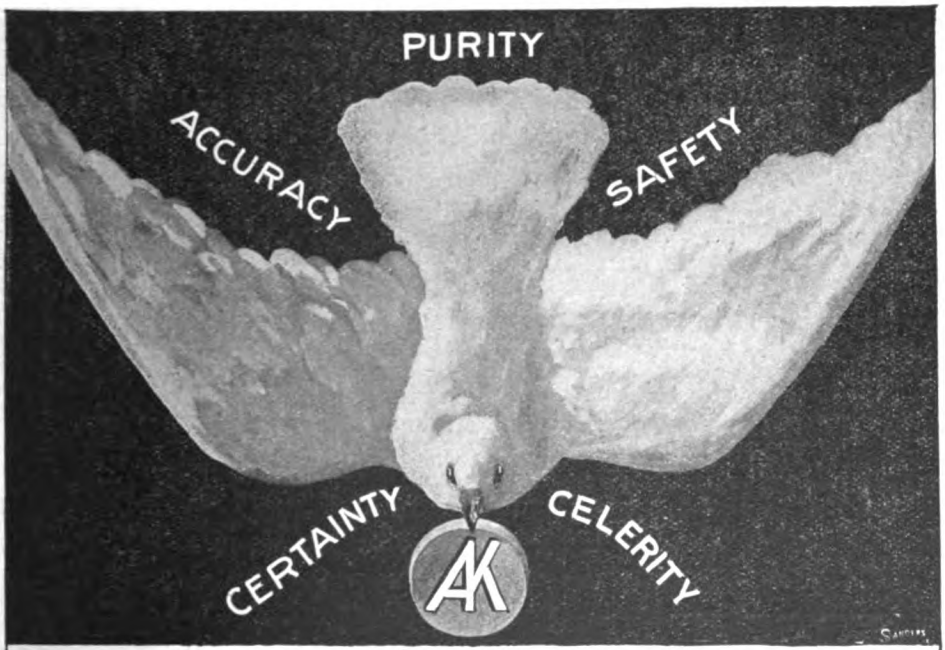

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Than Tir'd Eyelids on Tir'd Eyes"

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This apparatus weighs but five pounds and is fully illustrated and described in an advertisement on another page.

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Readers will notice the Dial list of leading druggists of Minneapolis. Out-of-town physicians who may wish to have special work done in the way of filling prescriptions, which cannot be done at home satisfactorily, would find that any firm named in the list will attend to anything entrusted to them with despatch and in a satisfactory manner. They all have facilities and the goods to suit the wants of any physician.

Extract from a lecture delivered at the Michigan College of Medicine and Surgery, by Dr. J. F. Bennett, Professor of Dietetics: Maltine is a pure extract of malted barley, wheat and oats (instead of being made from only one of the cereals), containing all of the nutritive properties of these three grains, in addition to the valuable digestive agent diastase. You will find it particularly valuable where you wish to get a bone-producing and fat-making substance combined with the digestive agent diastase. I use it daily in my practice, both alone and with the various tonics and reconstructives with which it is combined, with very satisfactory results.

A copy has been received by the Medical Dial of "The Antikamnia Fœtation and Parturition Chart," published by the ever enterprising, the Antikamnia Chemical Company, of St. Louis, Mo. It is a beautiful combination of three sheets of heavy Bristol containing nearly two dozen handsome colored engravings showing all the genital organs with descriptions, and the different periods of gestation from the beginning week. But on the main card is the Parturition Table, which is very convenient as showing the approximate date of delivery from any day in the year.

The Medical Dial is in receipt of a beautiful lithographed pamphlet from the ever enterprising Mr. Henry of Louisville, who in a letter says he is now principal owner of the celebrated French Lick Springs of Indiana, which has a capacity for 500 guests. The famous Spa Pluto, America's aperient and a product of these springs, he will introduce at once through the medical press as the most saline hydragogue eliminant and intestinal antiseptic, akin to Carlsbad, without the accompanying nausea and thirst.

Through an unfortunate error in the advertisement of I. W. Kelley & Co., of Chicago, the "Kelley Hot Air and Vapor Bath" has been misrepresented. During the three months it has appeared in the Dial the weight of the outfit has been stated to be "fifty-one" pounds. It should have appeared "FIVE" pounds. This bath is becoming celebrated, for it is everything that is claimed for it, and for many treatments is indispensable.

The Seeley Hard-Rubber Trusses, manufactured by Chesterman & Streeter, 25 South Eleventh street, Philadelphia, are about as perfect as is possible to make trusses. They fit accurately and the wearing of them is unconscious to the wearers. They hold the parts snugly in place where they belong, creating a tendency on the part of the separated muscles to heal, thus allowing nature to do her royal work.

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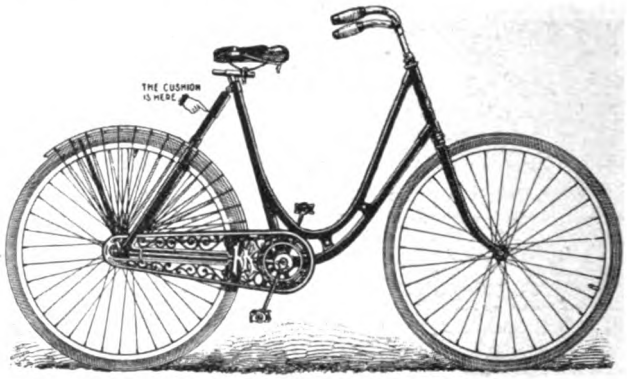

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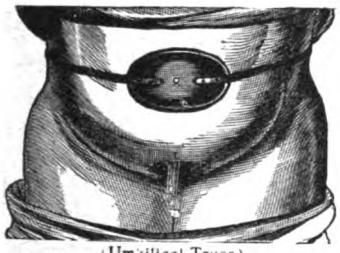

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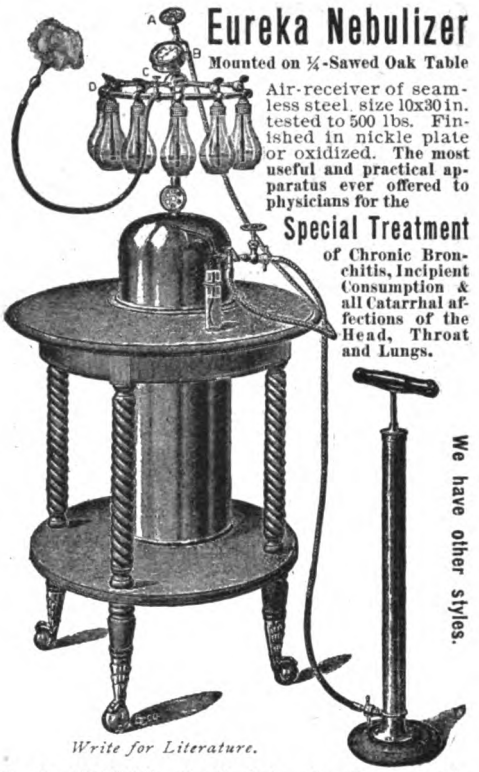

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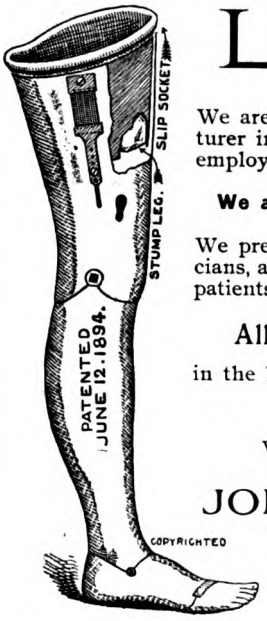

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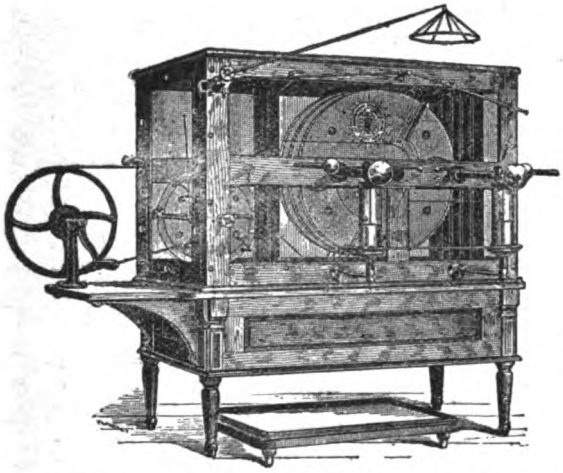

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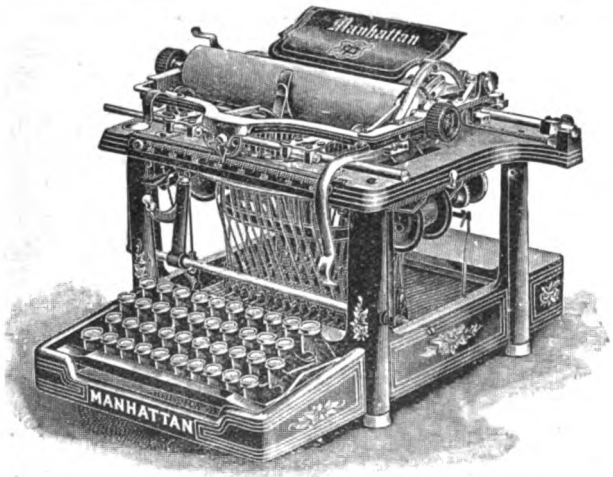

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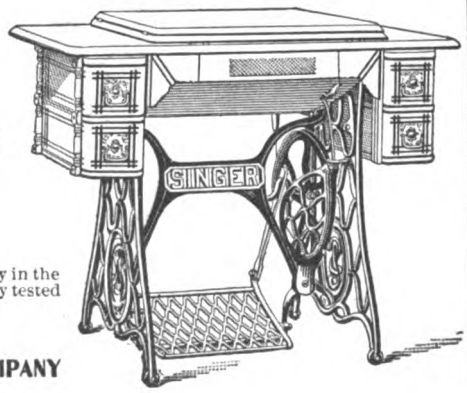

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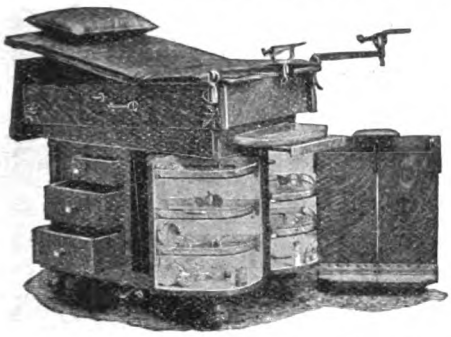

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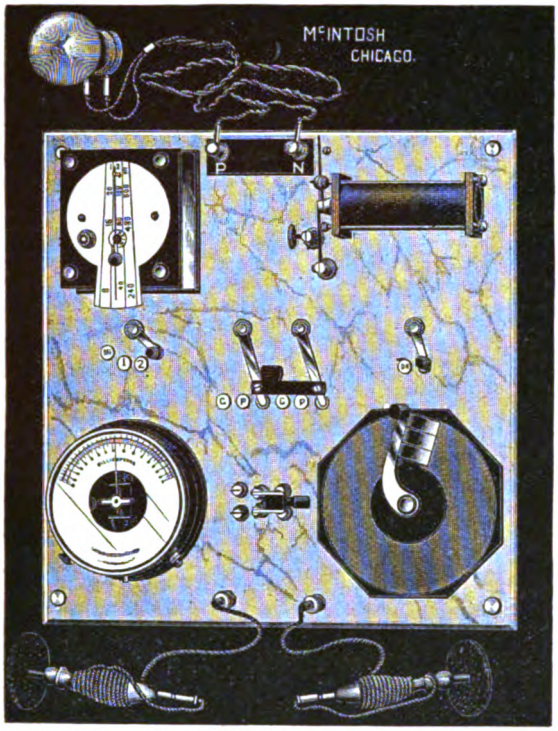

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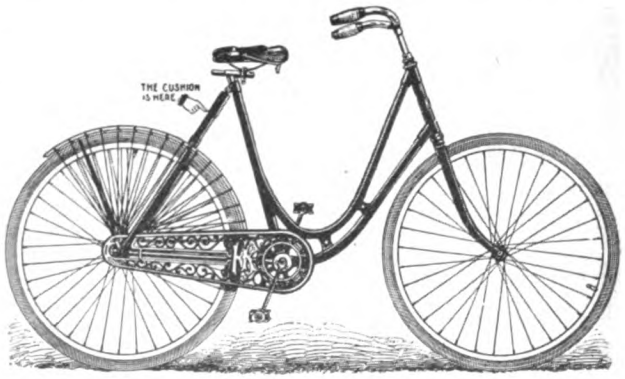

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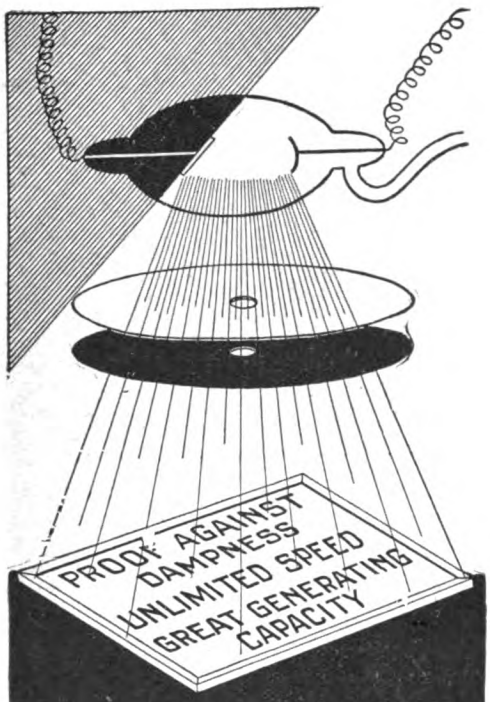

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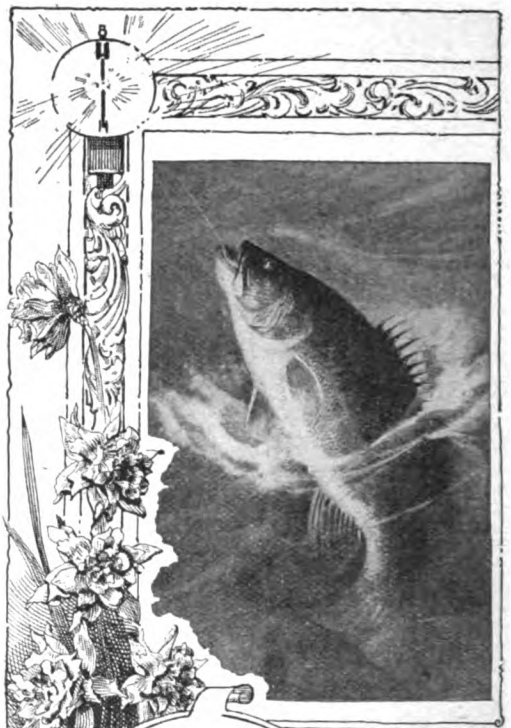

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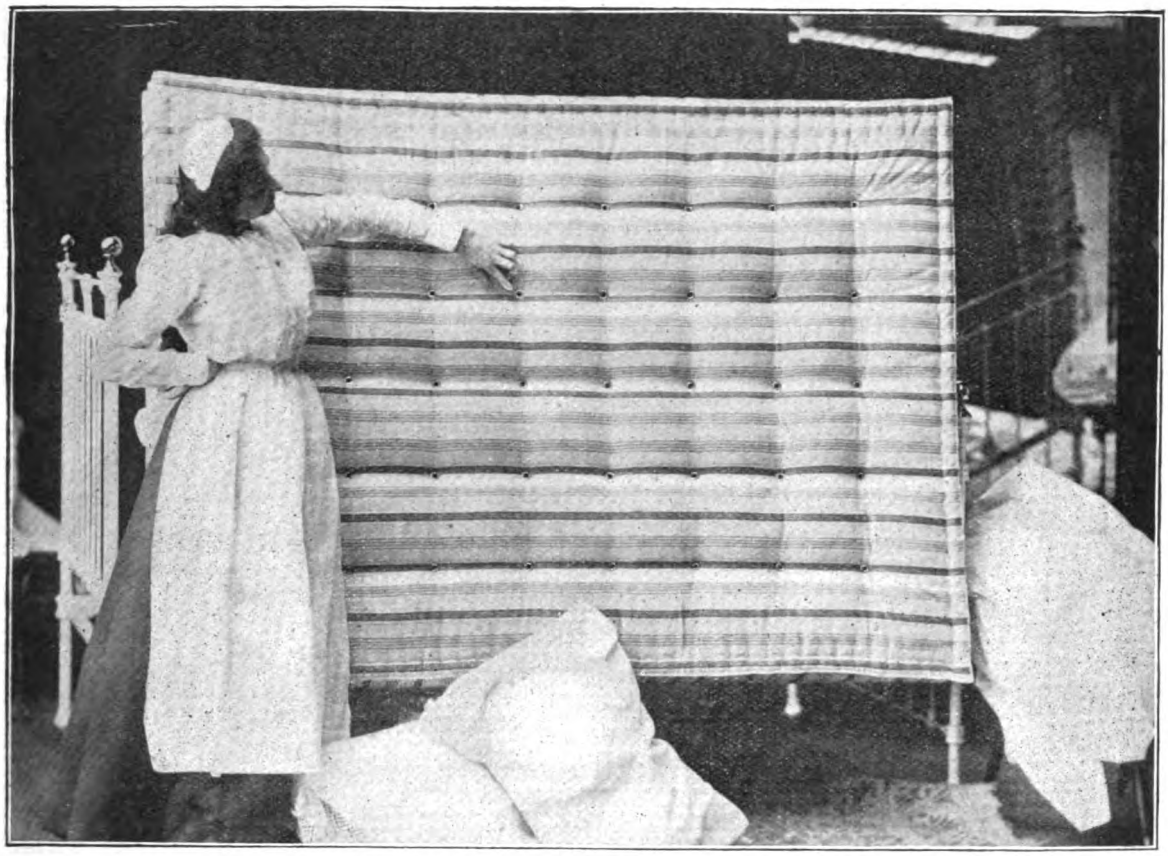

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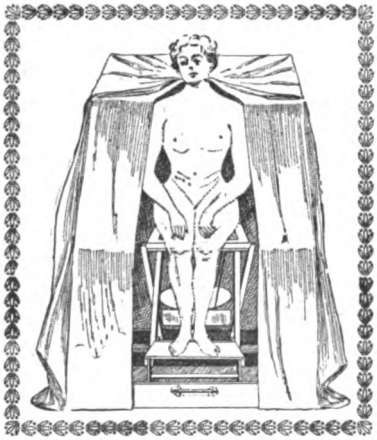

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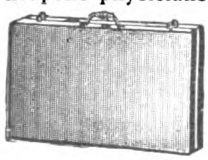

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THE MEDICAL DIAL

A Monthly Record of Medicine and Surgery.

Vol. I. MINNEAPOLIS, JUNE, 1899. No. 7.

Original Articles.

THE NEED OF SANATORIA FOR THE EXCLUSIVE TREATMENT OF PULMONARY TUBERCULOSIS.

By J. H. STUART, A. M., M. D., Minneapolis, Minn.

Those who have read the contributions of Dr. S. A. Knopf of New York to the medical journals during the past four or five years have doubtless observed that the writer has had one prominent and distinct purpose running through what he has written; and further, that his scholarship, his knowledge of his subject, his earnestness, and his clear, strong way of putting the matter, carry conviction of the truth and importance of what he has to say.

We are apparently on the eve of a change in the management of consumptive patients. Pulmonary tuberculosis is both preventable and curable. Active and efficient measures are being instituted, and the appalling death rate of this life destroyer is being materially lessened, and the economic savings to the world from this source will be correspondingly great.

At a conservative estimate fully one-seventh of the human race perish from this disease, and since its ravages are greatest during the productive period of life, and because this disease is a lingering one, detailing, as it were, like the wounded soldier on the battlefield, one or two other lives for the care of each stricken one, it can be readily seen how profitable it will be to save and restore a few of this class to productive labor. Many philanthropic men and women are investing their means in this work, more, perhaps, for the sake of their love for their fellows than for the profit likely to accrue, but for municipalities and states it might well be a consideration of savings and gain.

Dr. Knopf is a strenuous advocate of the establishment of sanatoria in connection with or adjacent to our larger cities for the exclusive use of pulmonary tubercular patients—closed against all other diseases. Reasons for this are based upon the well recognized nature of this disease.

(1) That it is an infectious disease, communicable from one person to another; not, however, by contact, as is smallpox, measles, etc., inscription in "Inferno": "Let him abandon hope who enters here."

The question naturally arises: Do sanatoria* contribute materially to the advantage of the patient in the way of cure, or material but by the entrance of the microbes into the air passages through the atmosphere or into the alimentary canal in connection with some form of food, most commonly milk or meat.

(2) Along with a sort of quarantine there should be a systematic and persevering treatment for the patient's benefit.

(3) A large number of our general hospitals supported by private charity absolutely refuse to admit tubercular patients, and

(4) Our general municipal hospitals avoid, very naturally, crowding the wards with phthisical patients. There are several reasons for this reluctance. In the first place, there is the risk to which the other patients are thus necessarily exposed, and there is the unfavorable and hurtful effect that the presence of an advanced case of phthisis unavoidably has upon the other occupants of the ward.

But there are other reasons that render the case of the poor phthisical patient more pitiable than even the above. His needs as to ventilation, fresh air, and temperature are by no means the same as those of other patients in

*Sanatoria is plural of sanatorium though Dr. Knopf more frequently writes sanatoriums. He rightly prefers the spelling sanatorium to sanatarium for reasons based upon the derevation of the wo words.

the ward, and he often suffers in this way; again, the kind of treatment or lack of treatment he there receives does him little or no good. He is looked upon as being there only to be in a way cared for until the inevitable end comes. The matter of his nourishment, so important in the care of this wasting disease, cannot at all be attended to here as it ought to be. There is written too plainly about the general hospital for the phthisical patient Dante's improvement of his condition? Have the results of work already done in institutions devoted to this service, established their practical value?

Dr. Knopf answers these questions strongly in the affirmative and brings cumulative evidence in proof of it. He has made extensive study of this work in Europe as also in this country. He was physician at the sanatorium at Falkenstein under Prof. Dettweiler, the pupil of Dr. Brehmer, founder of that institution. He visited and examined all the principal sanatoria abroad, spending one year exclusively in that way. His thesis before the faculty of Paris for his Doctor's degree was on "Sanatoriums for the Treatment and Prophylaxis of Pulmonary Tuberculosis," an abstract of which may be found in the New York Medical Journal for 1895, LXVII, pp. 419, 460.

At Falkenstein the mortality was reduced from 18.9 per cent to 11.9 per cent.

The statistics gathered for the author's work on tuberculosis show that in England, where hospitals for the exclusive treatment of consumptives have been in operation for many years, the mortality from tuberculosis has been reduced from twenty-four hundred and ten in a million inhabitants in 1870, to fourteen hundred and sixty-eight in 1893.

In Adirondack Cottage Sanatorium at Saranac Lake, New York, the least favorable results were 14 per cent absolute cures, 14 per cent relative cures, and 42 per cent ameliorations. Other favorable results are reported, but they are not at this moment at hand.

Our author does not pretend to claim that cures do not occur under other circumstances than in these institutions, for the post mortem appearance of cicatrices in apices of the lungs and of encysted calcareous concretions, have a long time been accepted as evidence of recoveries from tubercular attacks, but the percentage of recoveries in special sanatoria is so pronounced as to form a most reasonable and persuasive argument in their favor.

Spontaneous cures may and do occur from change of occupation, or of hygienic surroundings, or from change of climate, but it will not be pretended that such instances form any weight against the provision of special hospitals for this disease.

The author admits the benefits of certain climates for certain patients, but he does not believe in sending patients to a favorable climatic region and leave them there to pursue their own sweet will in the pursuit of health and recreation. While beneficial results might follow, and often do, perhaps, yet most commonly, they do not, and thus not only is a great expenditure of money and strength wasted, and lives are lost, but many other lives are exposed to infection and lost in consequence of the scattering of germs that should never be permitted.

Inquiries at famous health resorts, such, for instance, as the Riviera, reveal the fact that in consequence of the resorting thither of multitudes of consumptives to roam about and expectorate at their pleasure and convenience, the increase of consumption among the inhabitants there where this disease was once rare has been enormous.

For the reason, therefore, in the first place, that no patient ought to be permitted to be a source of infection to others, and for the additional reason, in a second important particular, that recoveries of patients, even in most propitious climates, are to a greater or less degree problematical if the patient be left to his own volition and care without the authoritative advice of specially qualified physicians, patients seeking health at climatic resorts should be under the same or similar exacting regime as those who seek refuge in sanatoria near their homes or in places less distant.

In this view of the matter it would be both impolitic and unwise to permit any section of our country, however promising as a health resort for consumptives, to be overrun and contaminated, without restriction or sanitary laws instead of establishing measures which would both preserve healthiness and at the same time insure far better results to the health seekers.

It will be pretended by no one that all cases of consumption are curable. There are those who are curable, those who are relatively curable, those whose conditions are improvable, and, lastly, those who grow worse and die.

The first class includes those who, whether absolutely whole or not, are nevertheless practically well. The second includes those who are put back to their best estate, or into a condition of, to them, relative health.

Are sanatoria for consumptives dangerous to neighborhoods in which they may be established? Dr. Knopf (Med. Rec., Oct. 3, 1896) shows that they are not. The laity, and, I am sorry to say, some in our profession, have been fearful that such an institution would scatter the seeds of disease amongst the inhabitants near by. There are no fears to be entertained on this account, because of the sanitary and aseptic management of the whole hospital. Not only are the physicians and attendants scrupulously clean, but they keep the building and patients in the same condition, and all sources of infection are removed.

The author lays stress upon the educating influences of these sanatoria, maintaining that the patients themselves learn to observe the rules of the establishment, and that its influence extends to the neighborhood, to the extent that the villagers follow its example. In the villages of Goerbersdorf and Falkenstein tuberculosis has actually decreased among the people, being one-third less than previously.

Patients with incipient phthisis, after a period of practical training, learn how to care for themselves, to avoid hurtful causes and acquire hygienic habits of great value to them. They become thereby an educating influence in themselves.

The number of sanatoriums abroad has multiplied rapidly, numbering perhaps at the present time not a great deal less than one hundred, one-half of them being for the poor.

As far back as 1856 Dr. Brehmer began the work by establishing what has been called the graded promade and diet cure. His pupil, Dr. Dettweiler, added the rest cure in the open air.

The methods in these sanatoriums are sui generis. The patients are classified, and methods are adapted to each one. The regime is exacting, quite military in its application, the medical supervision being constant and the personal training of the patients scrupulous.

"The physician presides at the table, directs the rest cure in the open air, the breathing exercises, and graded walks, the hydro-therapeutic applications, and the many other curative and preventative measures, the ensemble of which constitutes the real treatment of pulmonary phthisis."

The expectoration, the saliva and other secretions are religiously cared for by spittoons, damp cloths and paper napkins which are provided. The napkins and table utensils are boiled and disinfected after each meal.

The patients on entering the sanatorium are gradually brought by training into the methods in vogue. The leading ideas are graduated exercise, much time spent in the open air of low temperature in a state of rest, full feeding as the patient can bear, much attention being given to encouraging the patient to eat, and tempting his appetite. Bathing at least once or twice a week in cold water. This of course has to be brought about gradually, by first applying friction of the hand, then using a little alcohol, then a mixture of alcohol and water, and next putting about the patient wet cloths and using over them rubbing to encourage surface warmth. Finally the patient is able to sit astride a chair holding to the back, and a pitcher or two of water at a temperature of 60 to 45 degrees Fahrenheit is poured over the shoulders, followed by friction.

A close watch is kept by the physician on the temperature, and exercise is not to be taken if it reaches 100, and at no time is exercise to be taken to produce perspiration, which, if it occurs, is to be met by rest and dry rubbing in bed.

The patients are to sit in the open air, on wide verandas or in pavilions, well lighted, for ten or more hours in each twenty-four on cushioned ocean steamer chairs, or lounges, comfortably wrapped in soft, warm wraps or robes or furs, with temperature surprisingly low. They sleep in large, roomy chambers, with windows open and winds often blowing over them.

At the Nordrach Sanatorium in the Black Forest, the patients usually spend from seven to eleven hours daily in the open air, in spite of rain, fog, snow, and a temperature often as low as 12 degrees (Fahr.) below the freezing point. Patients quickly become hardened, so they rest and sit about till bedtime with wet boots, stockings or trousers or skirts. The clothes or boots are seldom changed, even if damp, after the morning walk. They sit at meals and lie down for the prescribed periods of rest, and only remove their wet garments on going to bed.

The main features of the treatment are mental and bodily rest, regulated exercise, abundant feeding, sunlight, when obtainable, fresh air, out-door life, and the total absence of close or crowded sleeping apartments.

Dr. Walther of the Nordroch Sanatorium was the first to teach the absolute unimportance of the weather, however bad, in the production of the common cold, which he believes due to an infection.

The lung exercises or gymnastics are regarded as of much importance. They appear to be a systematic use of the auxiliary muscles of respiration, by a synchronous use of the arms with the respiratory movement.

The patient first raises the arms from the side to a horizontal position, taking an inspiration at the same time, and while holding the arms in that position supplementing the inspiration by an additional short forcible movement. The arms are then let fall to their position at the same time with the expiration. This is repeated as prescribed by the physician. The next movement is to extend the arms horizontally in front with backs together, then sweep them round, touching the backs again in the rear, inspiring deeply at the same time. Reverse the movement during the expiration after the manner above described. In a similar manner the arms are to be raised vertically above the head.

These movements insure thorough dilatation of the air cells and a change of the residual air in the lungs. By this means the blood in the lungs is well aerated, and the small tubes and vesicles are kept clean of catarrhal products which doubtless form good soil for the lodgment and development of phthisical microbes. This exercise without doubt constitutes the best possible prophylaxis next to the freedom from exposure to germs. Fevers, diarrhœas and night sweatings are controlled for the most part without resort to drug medication.

It is the presence in the system of streptococci and their products, doubtless, that give rise to the high temperatures, the diarrhœas and the hyperidroses that are often so troublesome in the destructive stages of pulmonary consumption. The great cleanliness, the abundant fresh air and the systematic lung exercises so carefully enforced in these sanatoria greatly diminish or remove the conditions on which these phenomena depend, and hence the patient is wonderfully relieved of these distressing symptoms without special medication.

When diarrhœas occur the alimentary canal is first cleansed and the feeding properly adjusted to each case with enjoined rest. Sweating is controlled, if excessive, by wrapping the upper portion of the trunk in cloths wrung out of cold water to be followed by dry friction.

Coughing becomes a habit and by proper effort on the part of the patient may be controlled by his own will power.

Dr. Knopf tells us that Dr. Dettweiler was in the habit of saying to his patients that it is ill-mannered to cough in public without cause. Coughing is scratching the throat, and to scratch the throat is as bad as to scratch the head in public.

The use of medicines must be left to the discretion of the physician in charge, but in the sanatoria for consumptives of the class which Dr. Knopf is commending to the profession and to the people, the administration of drugs holds a very secondary place.

To combine the natural advantages of climate with the regime of the sanatorium would be to secure the largest per cent of cures and benefits, and this no doubt will be very extensively done, in this country, but the portion of our consumptive population able to go and remain in such localities is small and, for the most part, must either be provided for near home or be left unprovided for.

Near every large city or the center of every large population the sanatoriums should be erected, if for the poor exclusively, at the public expense. The structure of the building, its inside finish, and its whole appointments, whether for the poor or the well-to-do, should be alike excellent.

Dr. Knopf's ideal arrangement would consist of three structures, one to be built inside or near the city, known as a detention hospital, in which the patients may remain until they can be classified. Those in the incipient or pretubercular stage are, at the end of their probation, to be sent to the main portion of the hospital, situated within four or five hours' ride from the large city on a site selected for its suitableness in every way. The third portion to be a home for the less favorable cases.

In Europe the arrangements are for larger numbers in one institution, from seventy to one hundred, while in this country something more on the cottage plan is in favor, with accommo-

dations for from four to eight patients.

Dr. Knopf suggests a structure of which the following is a rather imperfect description: Three two-story pavilions, each capable of accommodating twenty-five patients, united by covered galleries one hundred feet long, serving on rainy days as promenades. Behind the central pavilion are the necessary structures for administrative, culinary and heating purposes. There should be an isolated building for recreation, one for visitors and one for isolation cases. Each pavilion to be 135 feet long, containing well ventilated and well lighted rooms, with bathrooms, sitting-rooms, parlors, etc. A veranda is to run the entire length of the building twelve feet wide, where patients can take the rest cure in the open air on comfortable chairs or lounges. These verandas can be used also for promenades. Attendants are to be constantly on hand to see that patients do not sleep too long, that they do not become uncovered, and to supply their wants.

The daily expense per capita of maintaining patients in sanatoriums will vary somewhat. In New York in seven of the most important hospitals it ranges from thirty-three cents to two dollars per day. In the Adirondack Cottage Sanatorium it is about one dollar each. In Europe I think it is somewhat cheaper.

Among the poorer class a large expense necessarily falls upon the public charity, even where the consumptive passes through his decline at his home or in charity hospitals, because not only of expense and loss of bread-winning power of the sick one, but also the loss occasioned by the necessary attention that must be given by others. Then there must be added to this total a contingent expense occasioned by the infection of others through the sick one.

Cities and states ought therefore, as a matter of public economy, to provide for the treatment of consumptives, with the expectation of what might be termed a profitable per cent of recoveries, as above sugested. But the argument from a philanthropic standpoint, together with that of prophylaxis, is even more weighty.

Dr. Knopf's earnest, persistent work of educating and leading our profession and our people on to an appreciation of what may be done for the pitiable victims of this fell destroyer, will eventually be followed by an abundant fruitage I have no doubt. He sanguinely exclaims, "It must be done; our national welfare is at stake!"

It has already been shown that a growing per cent is being cured, and perhaps an equal number relatively cured, or restored to usefulness in their avocations. It is not so easy to make an estimate of the saving of life by prevention through measures instituted and their educating effect upon communities. As has already been shown, the death rate has been greatly reduced in certain communities from this cause.

The laity, as well as the profession, will be on the lookout for the first signs of the disease, and the patient will come early under skillful medical care when the probabilities are greatly in his favor, which circumstance, together with the buoyant hope inspired by results already achieved, become harbingers of great good to him.

The North American Review, Feb., 1899, contains an article by our author on "The Tuberculosis Problem in the United States," which, if it can but secure a very general reading will do good service in educating the people as well as the medical profession, for it cannot be denied that a little mission work is needed in our own ranks.

There is here appended an incomplete list of contributions by Dr. S. A. Knopf to medical journals on this subject, some of which have been consulted by the writer in the preparation of this article:

"The Communicability of Tuberculosis and Special Hospitals for Pulmonary Consumption." N. Y. Med. Rec., 1894, LI., p. 502.

"Aerotherapeutics and Hydrotherapeutics in the Treatment and Prevention of Pulmonary Tuberculosis." N. Y. M. J., 1897, vol. XXIX., pp. 68, 74.

"The Present State of Preventive Means against the Spread of Tuberculosis in the Various States of the Union Critically Reviewed." J. Am. M. Assoc., 1897, vol. XXIX., pp. 875, 880.

"The Urgent Need of Sanatoriums for the Consumptive Poor in our Large Cities." N. Y. Med. Rec., 1897, vol. LII., pp. 775–778.

"Les Sanatoria: Traitement et Prophylaxie de la Phthisic Pulmonaire pour 1895." G. Carre, pp. 206; 4 pt. 8mo.

"Sanatoriums for the Treatment and Prophylaxis of Pulmonary Phthisis." N. Y. Med. Jour. 1895, vol. LXII., pp. 419–460.

"The Hygienic, Educational and Symptomatic Treatment of Pulmonary Phthisis, with a Plan for All Sanatoriums for the Poor."

"The State and Muncipal Care of the Consumptives." Canada Lancet, Toronto, 1898–99, pp. 784–793; N. Y. Med. Rec., 1898, vol. LI., pp. 433–437.

"The Tubercular Problem; a Critical Suggestion in Reply to Dr. Leland Cofer's Suggestion to Philanthropists." N. Y. Med. Jour., 1898, vol. LXVIII., p. 198.

Doctors Bowditch, Otis, Flick, Hinsdale, Lee, Hamilton and others have contributed valuable papers on this subject.

VERSES IN PRAISE OF A PHYSICIAN.

The following verses, originally published in the Westminster Gazette, have been widely quoted, and were published in the Lancet for March 4th. They are by Mr. James Rhoades, a translator of the Æneid. The Lancet for March 25th republishes them with the subjoined Latin translation, in elegiac metre, by Dr. J. P. Steele, of Dublin:

TO A CERTAIN DOCTOR.

"I'm only a doctor," is your cry,
"Concerned with the body's ills and maims,
But witless of art and poesy,
And lost to the spirit's finer aims."

Ay, only a hand by hundreds blest,
A heart that has ached for all, save self,
A brain racked ever to find them rest,
A soul whose riches are scorn of pelf.

In vain we argue; the theme is old;
Some men love horses, some singing birds;
But e'en if the poet's song ring gold,
Shall deeds that are gold weigh less than words?

You waived the pleasure and wooed the strife,
Of thorns, not roses, have made your bed;
You longed for the lovely side of life,
And fought with the terrible instead—

Longed sore, but never had time to give,
"Till now it is all too late," you say.
So be it. Why, man, the life you live
Is one long poem from day to day.

[Idem Latine Redditum.]

MEDICO CUIDAM.

"Sum medicus tantum qui sanem vulnera læsi
Corporis et morbos," care Machaon, ais;
"Quid mihi cum Musis cui surdo cantat Homerus,
Cui profert cæco dædala signa Myron?"

Sed tamen est pergrata manus tua milibus ægris
In quibus es totus nec memor ipse tui;
Dumque feras aliis requiem tibi sæpe negatam,
Sæpe bonus renuis quas merearis opes.

Cur remoramur in his? sunt argumenta vetusta;
Hunc sonipes, illum flens philomela juvat;
Aurea sint Sapphûs lyra et aurea verba, Machaon,
Aurea sunt per te facta magisque valent.

Gaudia præteriens optasti tristia vitæ,
Promptior in spinis quam recubare rosis;
Dilexti puer Aonidum nemus; arma Salutis
Castraque te retinent Hippocratea senem;

Otia et Aonidas defles nunc prorsus ademptas,
Inter opes Graiæ mentis et artis inops.
Sed quorsum hæ lacrimæ? Divini carminis instar
Est quantum vitæ cumque, Machaon, agis!

J. P. S.

—N. Y. Med. Jour.

THE AMERICAN MEDICAL ASSOCIATION

Will hold its fifty-second annual meeting in Columbus, Ohio, June 6 to 9, inclusive. The railroads are offering reduced rates to Columbus for the occasion, generally one fare for the round trip plus $2.00. A special train will be made up in Chicago over the Pan-Handle Monday evening, June 5th, and it would be well for physicians to take advantage of this opportunity to go in a body from the west, on account of the social features afforded, but other trains may be utilized.

A BONE-SETTING STORY.

A story of bone-setting is that of the Scotch laddie, Jock by name, who, after being carried by his mother, as an unwilling patient, to the bone man to get his leg set, was asked if the manipulation had hurt him. "No," said Jock, "it didna hurt me." "I told you it wadna be painful," said his mother.

"Ah," replied Jock, "nae wonder. You see, mither, I just let him fumble wi' that sound leg!"—Medical Press and Circular.

There should be no complaint coming from the poor of Chicago now. The Medical Record says: The Bureau of Associated Charities of Chicago has arranged to open a dental dispensary in each of its ten district offices, for the exclusive use of the poor. The object is to furnish dental service to the poor at the lowest possible expense. The charge for extracting teeth will be ten cents, for filling, fifteen to twenty-five cents. The dentists volunteer their services, and the material used is furnished at cost.

A DESCRIPTION OF THE CLIMATE OF NEW MEXICO.

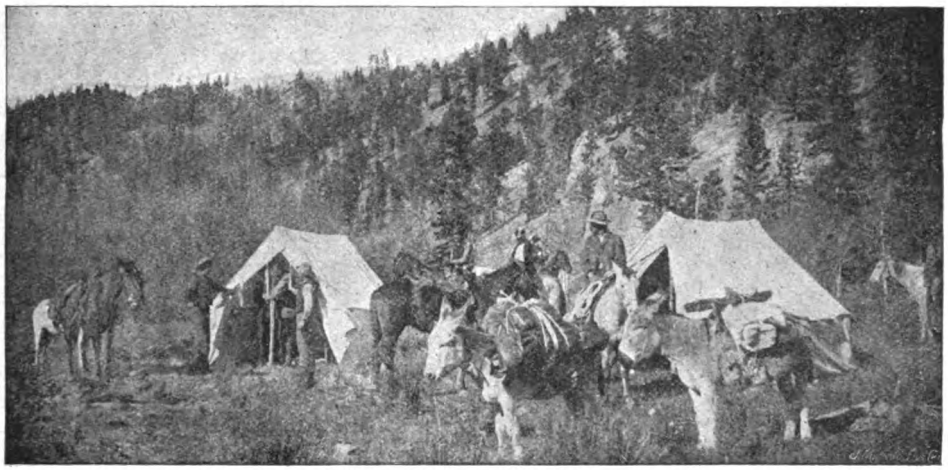
By Dr. Francis Crosson, Albuquerque, New Mexico.

The territory of New Mexico comprises an area of 123,000 square miles, 15,000,000 acres of which is tillable land. It has a population of 282,000, of which 26,000 is Indian. Its greatest length is 390 miles; its greatest breadth, 335 miles.

The high interior of our Continent comprised in the large table-land extending from the Great Divide in Colorado, through New Mexico, is not excelled anywhere in the world as a resort for consumptives. The altitude, the dryness, the purity of atmosphere, and the large amount of ozone it contains, combine to create conditions very favorable to recovery from tuberculosis.

There is, perhaps, no subject in medical literature upon which medical men in general possess less practical information than upon the subject of climate. This statement, which is based upon an observation of more than seven years, is not made in a spirit of criticism, nor is it in any manner intended as a reflection upon a class of scientific men so honest, conscientious and intelligent, as the great body of medical practitioners in our country. For the most part the physicians in the east have been obliged to rely for their information on this subject almost entirely upon such representations as are commonly made in the multitudinous mass of "write-ups" issued by railroad companies, land colonization enterprises and persons in general, who have "something to sell" in the shape of an "Eden" of one kind or another.

The American Climatological Association has done much to correct this evil by collecting and distributing reliable statistics, and it is today doing conscientious work that will, in a short time, prove of great practical and permanent value to every practitioner of medicine in the civilized world. The "chaff" is gradually being winnowed from the pure grains of truth, and the unfortunate sufferer from disease, who is compelled to leave home, friends, and all that is most valued in life, and seek change of residence in a climate favorable to the perpetuation of health and life, will be the chief beneficiary.



A SUMMER OUTING IN THE MOUNTAINS.

My residence in the territory of New Mexico extends over a period of more than five years, during which time I have had a very favorable opportunity of observing all that is most valuable bearing upon the subject of climatic conditions of this region. I am convinced that, within the geographical boundaries of this vast territory, climatic conditions exist superior in many respects to any other equal area on this continent. The climatic characteristics of the Territory of New Mexico embrace in an almost ideal condition those most sought and valued in the treatment of diseases of the lungs and respiratory system.

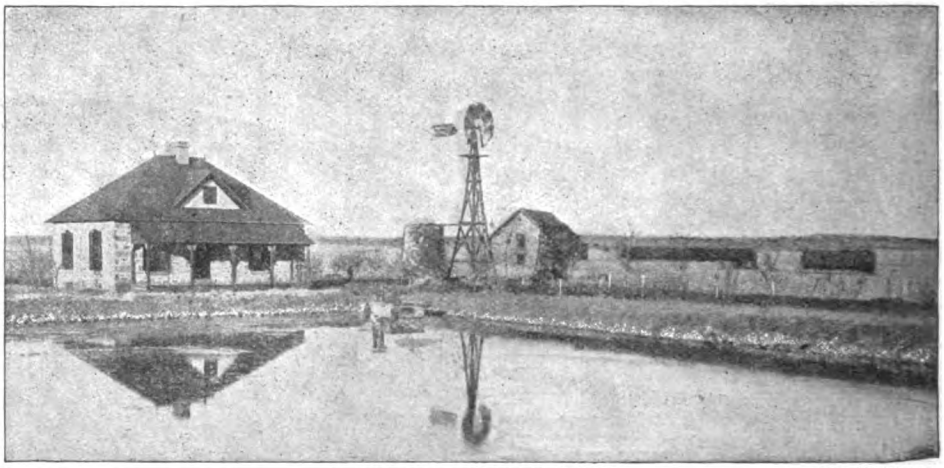
An absolutely ideal climate is not to be found anywhere, and it is a waste of time to seek for conditions which exist only in the minds of visionary writers. What is claimed for this region is that it possesses in a remarkable degree the most desirable elements fur-

nished by nature's laboratory for the treatment of certain diseases.

In writing of climatic conditions, it is impossible to avoid allusion to a disease that has baffled our best scientific minds for centuries, and which remains with us today as it accompanied the Jewish people in their wanderings through the desert, a scourge to the human race, a mighty destroyer of life, a "Banquo's ghost" that will not down—I mean tuberculosis.

The principle involved in the selection of a suitable climate for the treatment of persons afflicted with diseases of the lungs is one of chemistry rather than physiology, and in order that this fact may be made clear for the purpose of what follows, it may be well to discard a few antiquated and stubborn fallacies that have been too long insisted upon and clung to with unreasonable tenacity. There are medical men today—some of them teachers at that—who claim that there is not, nor can there be, anything in any climate that can be regarded scientifically as having a direct curative action upon disease. As we proceed we will see whether or not this declaration can be sustained in the light of practical demonstration and observation.

The leading writers and teachers of medical science today over the entire world are agreed that climate holds the first place in the treatment of pulmonary tuberculosis, and that any system of medical treatment ignoring the importance of this great factor is unworthy of much consideration by physicians. Only a few years ago patients afflicted with pulmonary tuberculosis were rushed to Southern France and Italy, because the climate in these places was soft and balmy. In our own country it was Florida and the Pacific coast towns in southern California. Only the temperature of these localities was considered; moisture and its congener, malaria, were seldom or never taken into account. Patients succumbed promptly to their disease, and it was a long time before the physicians living amidst these conditions awoke to a realization of the causes responsible for the many fatalities. Today the sea coast towns are almost abandoned by consumptives, and physicians inhabiting the very towns formerly advocated as health resorts for this class of invalids, are sounding trumpets of warning, and telling the afflicted to avoid these places as they would charnel houses.



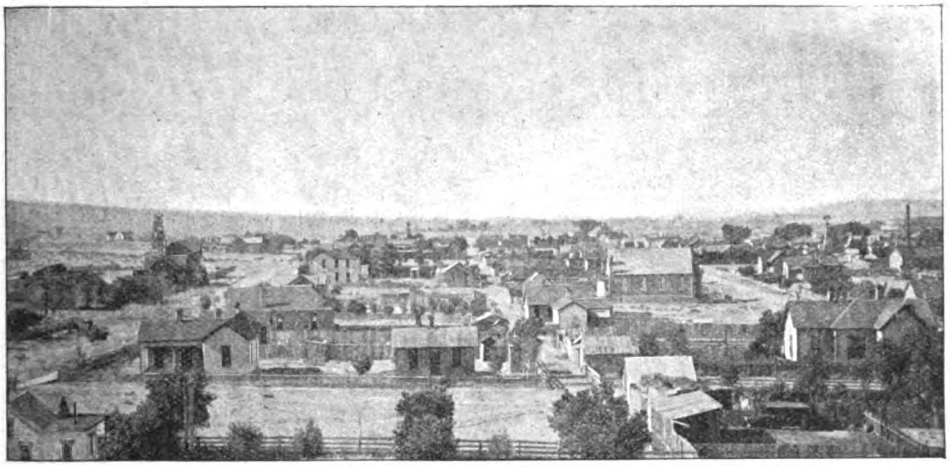
A TYPICAL NEW MEXICO RANCH. Recall, Photo.

It is held and taught by the ablest medical authorities over the entire world today, that consumption is a curable disease. I do not mean by this that all consumptives get well even under the most favorable circumstances; the term consumption is with many people synonymous with death; this, however, is not the case; perhaps ninety per cent of all cases of beginning consumption, if the diagnosis be made sufficiently early and the patient placed in proper climatic and hygienic surroundings, have a good chance of recovery. The fact of the curability of this disease, a fact well known to all experienced physicians, leads us next to the consideration of the best means we have to obtain this result.

The question of climate as a factor in the treatment of consumption of the lungs is receiving vastly more attention and study today than any special plan of medical treatment ap-

plied to this disease. Without entering upon a description of the changes which occur in the system before this dread disease is established, a glance at chemistry will enable us at once to perceive and appreciate the advantages which a properly selected climate presents to the sufferer, and demonstrate in a large percentage of cases, the superiority of nature's method of restoring deranged functions to the standard of normal health.

Altitude forces the lungs to work, thus affording them excellent gymnastics. The rare ozonated air of this region permeates the lungs to their ultimate ramifications, preventing, as has been conclusively shown by Dr. Roland G. Curtain of Philadelphia, pulmonary hemorrhage, and revivifying the tissues of the body by supplying them with an abundance of oxygen. There is no health resort in Europe, not excepting the much-lauded Riviera, that can show such a stable and equable range of heat and cold as can be found at the meteorological station at Santa Fé, New Mexico.



THE SUBURBS OF ALBUQUERQUE

Changes in temperature throughout the Territory are never sudden, hence the invalid and health seeker by a little attention to his clothing can exercise daily in the open air, and have no fear of colds and inflammations of the air passages so trying upon invalids resident on the Atlantic and Pacific coasts. An altitude of at least five thousand feet is the best for most patients in the incipient stage of pulmonary tuberculosis, and a patient recovering from his disease should be made to understand that where he regains health that should be his permanent residence. Walking affords the most natural form of physical exercise, and if regularly pursued in a favorable climate will obviate the imaginary necessity in the shape of a movable gymnasium with which so many invalids hamper themselves.

The "climate cure," as it has been called, holds out, in my judgment, more encouragement and hope to the afflicted than all other methods of treatment combined. This is stating the case strongly, but truth is truth, and it must stand.

After extensive travels in all parts of the United States, including Florida, Texas, North Carolina, Colorado, Arizona, California, as well as Mexico, a trip through New Mexico settled my mind upon the subject of climate. Since coming to this territory I have been frequently confronted with what might be called "star cures," many of them patients brought here in an ostensibly hopeless condition. I have taken pains to personally investigate the histories of many of these persons, and I can unhesitatingly vouch for their accuracy.

The fame of New Mexico as a sanitarium for persons suffering from, or threatened with, pulmonary disorders, has spread far beyond the limits of the United States. A committee traveling around the world under the auspices of the "Societé Medicale" of Paris, carried back to France the report that in the climate of New Mexico they found more beneficial characteristics and fewer drawbacks than in that of any other region of the world visited. It will take first place among the world's sanatoria for pulmonary consumptives in the near future.

All the required characteristics are here: A dry aseptic air, a light atmospheric pressure, a dry, porous soil, a maximum of sunshine, a min-

imum of cloud, and a slight variation of temperature only between the extremes of heat and cold. New Mexico lies in the region of greatest dryness in the United States. The average relative humidity of the territory ranges from 20 to 43 per cent, according to locality. The average at Boston is 69.2 per cent; at Buffalo, 73.1 per cent; and at Olympia, Washington, 79.2 per cent. The rainfall for the entire territory is, approximately, 10.2 inches.

The climate of New Mexico is its greatest glory. It is a land of sunshine. Here extremes are unknown; in summer it is never uncomfortably warm in the shade; in winter it is delightfully invigorating in the sun. The atmosphere is practically free from moisture, and absorbs so little heat that in the extreme southern part of the territory the direct rays of the sun in summer may be hot, but they are always accompanied by a deliciously cool breeze. The air has a crisp freshness, even in the "dog days," that belongs to New Mexico alone. The dryness of the climate is not intermittent; it is constant. The equability of temperature is shown by the fact that in summer it is cooler at Santa Fé than at any other meteorological station in the same latitude, and that this absence of summer heat is not counterbalanced by the drawback of extreme coldness in winter, the mean temperature there being the comfortable and tonic figure of 28 degrees, Fahrenheit, during January, which is the coldest month in the year. This characteristic applies to the entire territory. In the southern half of New Mexico, both the summers and winters are naturally somewhat warmer.

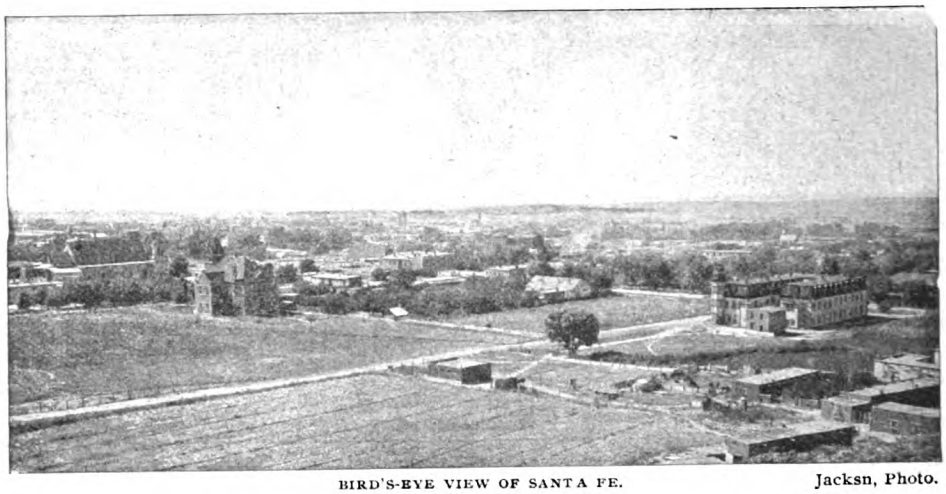
The following figures are taken from the records of the United States Weather Office at Santa Fé:

1892.

Average temperature, degrees	49.1
Maximum temperature, degrees	90.0
Minimum temperature, degrees	1.0
Average relative humidity, per cent	43.
Average velocity of wind, miles per hour	7.7
Total rainfall, inches	11.62
Number of cloudless days	248
Number of fair days	97
Number of cloudy days	29

1893.

Average temperature, degrees	49.4
Maximum temperature, degrees	89.0
Minimum temperature, degrees	5.0



BIRD'S-EYE VIEW OF SANTA FE. Jacksn, Photo.

Average relative humidity	38.
Average velocity of wind, miles per hour	7.3
Total rainfall, inches	14.94
Number of cloudless days	235
Number of fair days	99
Number of cloudy days	31

1894.

Average temperature, degrees	48.9
Maximum temperature, degrees	86.0
Minimum temperature, degrees	0.0
Average relative humidity, per cent	41.0
Average velocity of wind, miles per hour	6.9
Total rainfall, inches	13.13
Number of cloudless days	213
Number of fair days	114
Number of cloudy days	48

The sunshine records of Las Cruces, in the extreme southern part of the territory, at an altitude of 3,000 feet, and at Las Vegas in the eastern part, at an altitude of 6,000 feet, are

equally good. In fact, the weather records at Santa Fé are a general average for the whole territory, and the health-seeker has a wide range of choice as to locality.

The exceeding dryness of the atmosphere is accounted for by the contour and position of the mountain ranges.

Evidence is abundant that the mortality from pulmonary tuberculosis is no greater at the present day than it was hundreds of years ago. A recent article was published in one of our leading medical papers showing that in Jewish history, years before the Christian era, pulmonary tuberculosis was as rampant as now. This would tend to refute the idea that this disease is at present on the increase, and at the same time indicate that we possess no better therapy for this affection now than did the ancients.

THE MINING CAMP OF KELLY, NEAR SOCORRO.

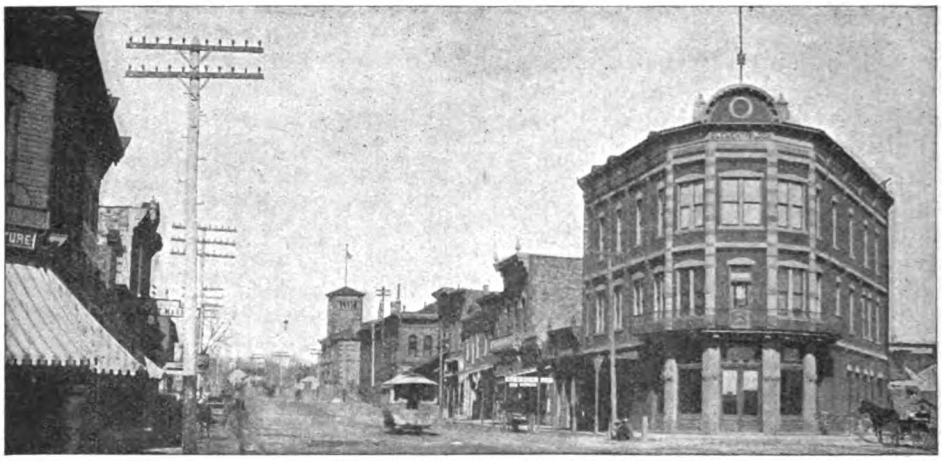
The greatest number of deaths from consumption occurs in workers exposed to irritating substances in the respired air. In Switzerland, ten out of one hundred stone cutters die from pulmonary tuberculosis. In England, of one thousand deaths occurring in these workers, three hundred and forty were due to this disease. It makes cruel onslaught likewise in those individuals who habitually occupy a bent posture at their occupations, and in those who live sedentary and intellectual lives. Of one thousand deaths in Italy among students and seminarians, four hundred and fifty died of consumption—45 per cent. In England, of a similar number of deaths in printers, four hundred and thirty succumbed to this disease.

On the other hand, statistics show that it is quite exceptional for this disease to be the cause of death in those who live in the open air. In Switzerland, of one thousand deaths occurring among out-door laborers and farmers, not more than one or two die of pulmonary tuberculosis. A similar number of deaths in Italy among shepherds and farmers show only from forty-four to forty-five deaths. In France the sanitary statistics gathered from six hundred and sixty-two towns show that the more the population is conglomerated, so in proportion are the inhabitants gravely affected with this disease. The vital statistics of New Mexico show the death rate from pulmonary tuberculosis among the native population, Mexican and Indian, to be three in one thousand, the lowest known. This, of course, does not include patients who come here from the states and from abroad suffering from this disease. During the past five years public attention throughout the United States and Europe has been directed to this territory as a natural sanatorium to a greater extent than ever before.

The American Health Resort Association has published a large number of reports on the subject, which are attracting invalids here from all parts of the world; and there is no doubt but that in the near future physicians informed upon climatological questions will unanimously pronounce this region one of the most valuable health resorts in our land.

In order to derive all the possible benefit from such a climate as that of New Mexico, the health-seeker should live out of doors. He should not only take exercise in the open air, but he should sleep out of doors. If he has the strength to get about at all, the best he can do is to go into the pine forests and camp out.

The nomadic life of the tent dweller is the best possible treatment for incipient pulmonary tuberculosis. It is often a grave mistake for an invalid to seek change of climate in a place where he has no friends, no occupation, nothing to distract his mind from himself and his malady. In a few days he exhausts the possibilities of mere curious interest in unfamiliar surroundings, and then he strolls about alone, or with chance acquaintances, until he becomes weary of the town and the monotony of his existence. Homesickness ensues, the mental disease more than counterbalances the climatic benefit, and the health-seeker, in desperation, returns to his home, preferring the certainty of death among friends to the possibility of a prolonged existence under unsupportable conditions. If such a health-seeker would procure a saddle-horse, pack animals and a camp outfit and go into the mountains with a good guide and agreeable companions, he would find no monotony and no homesickness, but would gain strength and buoyancy of spirit and never know a dull hour. A year out-door life in the dry, bracing air of New Mexico will, I believe, arrest any case of beginning pulmonary tuberculosis if the sufferer has the necessary strength and vitality to begin such a course of treatment and take ordinary precautions against undue exposure and overexertion.



BUSINESS SECTION OF EAST LAS VEGAS. Miller, Photo.

NEW PUNCTUATION MARK.

Teacher—"Can any of you children tell what an interrogation sentence is?"

Patsy (confidentially)—"Please, mum, it's one o' them sentences you always put an ear after."

ALCOHOLISM AND ALCOHOL.*

By G. D. HAGGARD, M. D.

The hoary age of this disease, the amazing swath of misery it has cut out of the life and happiness of centuries, the present social hold of alcohol, its increasing volume, commercial and political power,—these combine to make it worthy of the careful consideration of the general and special student, the citizen and the statesman.

A definition of this disease is accomplished only in a description of the acute and chronic forms and their stages, with their pathological changes, all of which are well set forth in Sajous' Annual Cyclopedia of the Practice of Medicine. Late and important additions to the pathology of the nervous system are current.

Causative factors include:—The agent, alcohol; the organism and its variations; the environment; society and government.

Ethyl alcohol, and the heavier alcohols in smaller amount, with carbondioxide, are produced from suitable media in the presence of an enzyme accompanying the growth of yeast. A part of the media is consumed in the rapid growth of the yeast.

The heavier alcohols, called fusel oils, are more rapidly poisonous. In root alcohols, and in fermented drinks, they bear no mean part in the injury of the drinker who is vastly drunker than if he had taken instead an equal proportion of rectified alcohol in dilution, such as the "made liquors."

*Read before the Hennepin County Medical Society, May, 1899.

The growth of yeast is retarded by one part of alcohol in 100,000 of the media, and is stopped by 14%. Any amount given to higher vegetables is deleterious. In the weakest dilutions it slows the motion and shortens the life of the amœba and of white cells of animals, making them granular and spherical. The injury to these organisms is positive and increases with the strength of the alcohol—there is not stage of stimulation. They are not restored by a true stimulant or relaxant. In the presence of a true stimulant, the cell life is not shortened and function is increased.

This deleterious effect of alcohol is seen again in poor reparative force and lessened resistance to infection of the alcoholic subject. Cholera, yellow fever, sunstroke, attack alcoholics in preference to others.

Alcohol administered to dogs decreases the progeny and lessens the growth. Applied to incubating eggs, it produces defectives and monstrosities.

Parkes' experiments on men and those of Beaumetz on lower animals determined that a large amount caused acute poisoning. Half the amount gave a longer period of exhileration, less subsequent stupor and less incoordination. When 1 to 1½ ounces of alcohol was given diluted, in divided doses, in 24 hours, to a man of 144 pounds, undergoing full exercise, no perceptible disturbance arose and no excretion would yield alcohol. He concluded that it was oxidized as food and was probably useful. The only logical conclusion from the first and second observations of evil effect and an indifferent third observation would be that probably it still works injury. Guided by the sensation of the drinker, all should harmonize quite with the defenders of the drug. But "one's feelings under an anæsthetic are insane."

F. McD. Cosgrave reviews Ridge, Lauder Brunton, Parks, Wallowisc, B. W. Richardson, Martin, W. A. Hammond, Prout, Fife, Vierordt, Herver, St. Sayer, Smith, Perrin, and Lehman, and concludes: "It has been found contrary to what has been and still is believed, that alcohol is first narcotic rather than stimulant —all but Smith found less carbonic acid gas exhaled." Vierordt, Prout, Snow, Ed. Smith, Lallemand, Perrin and Duroy contend that it is not oxidized. Dr. Anstie scouts the tests made by these. Suppose it oxidized in the body, we have not proved that all bodies oxidized within the body, e. g. toxins of diseases—are useful and desirable.

Alcohol does not effect production of heat, but accomplishes a dissipation of heat. Alcohol is probably oxidized—producing heat, acting as a food. (Reichert.)

"Alcohol is cumulative as are some salts of lead, copper and silver." The behavior of alcohol toward the blood and toward albumen in solution implies a combination with blood and tissue elements whence it is dislodged with difficulty. It may thus escape oxidization. Thirty-three per cent of potass bromide is eliminated; is the 66% therefore oxidized, acting as a food—a generator of force?

Upon digestion, Gluzenski found a retardation for three hours, then an increase and prolonged activity as regards amount and activity of gastric juice. This would presage a final failure which we know occurs.

Mohilanski treated fifteen students, age 18 to 25 years, with two to five ounces of alcohol in 40% water dilution and found more assimilation of nitrogen in the habitue and less in others. Chittenden and Mendel found no useful results from test-tube digestion.

Alcohol decreases the oxygen-carrying power of the blood and is a vaso motor paralyzant; the effect on thin walled distal structures is earlier and on the heart later. Fuller pulse and surface moisture are evidences of this paralysis. "Even in moderate amounts (Glazier) it irritates the kidneys, producing an exudate of leucocytes and cylindroids. It either lessens the solvent power of urine or increases uric acid and oxalate crystals. The effect of a single dose lasts 36 hours—and repeated is cumulative." The apparent recovery is not real and damage results.

But to co-ordinate these physiological findings and put them to a sufficient test, Dr. J. H. Kellogg has given to vigorous young men two ounces of whisky and has tested tactile reaction, temperature reaction, accommodation, and the strength of all important muscles. All functions were decreased and weakened,—muscular work lost almost one-third. The test meal and various alcoholics in different amounts gave remarkable loss of digestive power in all cases. This would seem to answer the question of the action of alcohol on the human body.

It would appear that we have also an answer to the legal question, When is a man

drunk?—Just as soon as he has taken alcohol, his judgment is impaired.

These results accord with experiences of Stanley, Greeley and Nansen; also with those of Wolseley, Roberts and Kitchener. Under these last three in the British army, the total abstinence men (almost half the Indian army) have less than one-tenth the sickness, disability and offenses of the other section. Sir H. Kitchener found that grog rations showed loss of endurance, health and morale in four days; a beer ration gave the same result a little later. The abstainers gained in desirable qualities daily.

In the German army the Kaiser finds the beer drinking soldier 15% to 20% less effective than the abstainer. The loss of specific weight, the increase of water and fat content of alcoholized tissues make them more subject to exhaustion, infection and cold effects.

In a six-day bicycle race in December, at New York, there were thirty-three entries. Twelve staid in the race—all who used alcohol dropped out. The one who had never touched it won the race, as he did the previous year; the second used none; the third drank sparingly, had one-half tablespoon of brandy in training; the fourth takes a drink occasionally when he feels like it, in training had a little beer. Here is an inverse ratio between drink and victory. The latest English-American boat race gave similar results.

But in fatigue has it not benefited? Alcohol abolishes the sense of fatigue and allows the exhaustion to go farther. The period of recuperation is lengthened. In a bicycle race of the previous year, a very little champagne was given on the last day, and disaster ensued.

We expect an agent to act somewhat in disease as in health, for example; broth, aloes, strychnia. However inconsistent the views of its friends, alcohol will be fairly consistent in its behavior in the sick as in the well.

A fellow physician says: "When I find a patient fevered and delirious, with dry tongue, subsultus and running pulse, and see this poor picture brighten and moisture come to parched surfaces under alcoholic administration, this demonstration personally is worth to me all the statistics in the world." What is this demonstration, except of the stage of wet mouth and vasculur paralysis of the grandiose? It can be no other, for he gives that dose. But it takes figures to tell the later history of all [illegible] cases, and he who scouts them is not wise. such c

Beale says alcohol may be of use in cases where cell proliferation is too rapid, as it kills many and retards others.

F. P. Henry, in Hare's Therapeutics, says of typhoid patients, "Most are better without alcohol. The habitue requires decided doses increasingly larger. After 40 years of age, the temperate require three ounces of whisky daily. It is better when the skin is leaky, a low pressure pulse, delirium, subsultus and restlessness."

Diakonoff gave to seven fever patients one and three-fifth ounces of alcohol in 40% dilution in four doses, and found (1) lessened assimilation; (2) spoiled appetite; (3) increased stools; (4) lessened albuminous change in body; (5) patient feels better.

Osler says alcohol may be given if the heart is feeble and first sound obscure, if there be muttering delirium subsultus and dry tongue. Give freely brandy or whisky; eight to twelve ounces is a moderate amount. Mr. Osler says, "It would be like 'hoisting' the abstainers 'with their own petard' to quote typhoid mortality of London Temperance Hospital of 16% to 20% for the past twenty years." On the same page, he says the mortality of the Metropolitan hospital for ten years is 17% to 18.2%. Why did he say twenty years to one and ten years to the other? On the basis of any decade, the abstainers are ahead. An advocate of alcohol evidently carries a "petard" himself. Why discard that previous ten years of other hospitals? It was fatal to his insinuation.

Again, to adjust and co-ordinate the mass of observations let us refer to hospitals. We do not want alone the treatment of emergencies and records of early subsequent observations, but the total result. In the Boston City Hospital, 1,042 typhoids were treated with alcohol and the mortality was 386; 1,042 without alcohol, purely expectant, mortality 81. Dr. A. M. Lesser who made a low mortality record in the Red Cross Hospital of New York, by banishing alcohol, went before the Medical Association of Havana, before the war, and proposed the non-alcoholic treatment of the famine fever among reconcentrados—executed the plan and saved over 60%, while the others lost almost all. The Society acknowledged him justified and declared him a benefactor. The Temperance Hospital in the City of Chicago has made an unusually low mortality record. Six general hospitals in New York City

have made mortalities forming an increasing scale or series in direct proportion to per capita cost of liquors used therein. The higher mortality goes with largest prescription of the drug. It is the same in the soldiers homes. Dr. Geo. R. Achor says, "In Edinburgh Hospital, under the alcoholic treatment of delirium tremens, the mortality was 25%; this was abandoned and 300 cases treated without mortality." The same is true of the Philadelphia and Chicago hospitals. In order to find the truth of these statements, I took at random, not knowing the contents, twelve hospital reports from various states. Eight of these had needed data. Their mortalities were from 12% to 6.9%. Those having 10% or over spent 30 to 45 cents per capita for liquors and alcohol; those having 9% or less spent 18 to 23 cents per capita.

Some have contended that after the meridian of life it is useful because of failing nutrition and others because of the opposite; still others, that in asthenia of children's diseases and in threatened prostration of summer heat (Jacobi), a little whisky is good. There is no strength here, but great weakness. "It is the climax of poisons that at once excites to exhaustion and cuts out nutrition" (Crothers).

The individual element in the causation of alcoholism depends somewhat on heredity, age, sex, temperament, race, and even soil. Yet it invades all classes, all grades of men. The capacity and desire for happiness or pleasure exists in normal man and, also in many the readiness to seek it unearned, borrowing from the future; even by an anæsthetic; and in a thousand ways, it seeks him—for pay.

Of those who came for treatment, in one retreat, there were: Collegians, 18; university graduates, 14; academics, 22; and from common school, 26. A large list of men as able, as well rounded, as Chas. W. Dilke, who all but ruined his life by intoxication, would be easy to make. That the medical profession affords too large a quota points the same way.

It is only in later times that public sentiment and the known treachery of the drug have kept the gifted—Palmerston, Gladstone and Sherman—to such an age. Statesmen usually failed at 40 or 45.

Heredity is undoubtedly a cause. No immunity to alcohol is possible since the issue of the alcoholic have less resistance than the parent. Fifty per cent of children of drunkards have a decided tendency (Greiner) to alcoholism. The morbid impulse is worse when it dates from the conception state.

But many victims are the moderate drinkers, those who fill the walks that defectives do not reach. The shortened lives of actuaries' lists are selected, sturdy, industrious, reasonably independent, classed as temperate lives.

Poverty of food, as among the Swiss, where coffee and potatoes alone are eaten; the belief in a restorative effect of brandy, and the pride of imitation, are causes of youthful alcoholism. (Demme and Bunge.)

Nerve shock, grief, joy, sudden riches or losses, account for a considerable number of cases.

Into this field of mingled strength and weakness, of ignorance unorganized — this army of halt, maimed, and blind—marches a solid combine of the commercially strong and greedy, under government armor enlisting every known force to compel men, women and babes to drink and die. The most powerful lobby is the liquor lobby. Very lately a vote affecting this business was taken in the Senate. A Senator in the aisle stretched an arm over either side, snapped his thumbs, saying, "All up!" A good majority arose as they sought to do in the case of the army grog-shop, which they endowed with $100,000 public money ten years ago.

The people of Iceland, of Hawaii, of Madagascar, and others, have been forced by the sword from positions of political and personal abstinence to admit this evil. During the last year, this disease has been forced on five prohibition districts of our country by the general government. Soldiers have been made bartenders and court-martialed when they refused; the chaplains reprimanded and insulted for reporting the devastation of alcohol—one of their sworn duties.

Why should alcohol not lord it somewhat? The government is its active, energetic partner, who gives free warehousing and exemption from tax while making, ripening and shipping out and in. The Secretary of State is chief beer-drummer among the child races of the earth. And as to any estimate of public opinion to the contrary, who can make it or suspect it while the press advertises "The Doctor's Choice," and is under the pay of "the trade"?

The social hold of this evil does not seem greatly less than in those days of grosser drinking when Napoleon thought it "better to leave the dining-room with the ladies." The recklessly drunk are most sure to find that other vice beyond.

But the respectable drinking puts the well poised in the grip of habit often in the gutter and makes him alway at once and at least the most obdurate enemy of any hearty prophylaxis of this disease.

Very conservative estimates by medical men find the physician's prescription responsible for from one-half to one per cent of alcoholism. Certainly his example is farther-reaching; he daily meets the "venerable superstition" and withholds his warnings; tacitly allows its worse than useless indiscriminate exhibition; "smiles" a little himself even before children, and much of it not to offend his client. The first report I ever read of the American Medical Association which met at Washington gave 1,200 as the number of champagne bottles emptied at its banquet, and the orgies finished partly under the tables.

Some have said that stress of life is a cause; but stress of life, longer hours, more constant care, and the added tax of child-bearing, have still left woman comparatively out of the toils of drink and tobacco.

Above all these, the capital reason is the "open door," whether by social pressure, by genteel unction, by congenital defect, or stress, or poverty, this monstrous cavalcade to the regions of the lost, stops when the door closes. Why do physicians furnish 40 per cent of opium habitues? their wives too great a number, and the handlers of liquors too great a quota of alcoholics? It is the open door. The over-taxed, under-fed, short-of-sleep mothers have been farther from this open door, the easy bait, the salted meat, the extra salted crackers and salted beer.

The saloons of St. Louis were closed one Sunday last month; and the central city dispensary had not one surgical case, where the average is twenty-five new ones.

Alcoholism is usually neglected, so its incidence is unknown. There are 250,000 saloons; 25,000 men and boys become employees or proprietors yearly. The life of the temperate is shortened 10 years, but he does not die of alcoholism. The mortality of alcoholism is possibly 5 per cent of the whole, but the mortality is in the list of other diseases which alcoholism fosters: Eighty per cent of heat-stroke, a severe infection, is due to alcohol. Combined actuaries' tables of England for thirteen years show the abstainers' mortality 58.8 out of a possible 100; the moderate drinkers, 80.8; the Scottish tables, 15 years; abstainers, 47; moderate drinkers, 69. One-half the children of drunkards are defective; and there are said to be two and one-half million hard drinkers in the United States. There is a much larger number of alcoholics. Each class has its progeny of criminals and defectives, an increasing burden to every state. One-third of the insane in the Department of the Seine in France are due to alcohol; and the number is trebled in thirty years.

When Dr. Ames returned, he had seen no drunkenness in France. When Kate Field was working for the government wine-house in California at $3,000 a year, she could not find any, either. But Dr. La Borde, of the Academy, says, "If something is not done at once, in a very few years the whole working class will be drunkards." The consumption of alcohol is the grade of damage done, and France uses the most. She rejects 50 per cent in the examination for the army, like Switzerland and Germany, and lessens the required height of soldiers every five years. All rulers, all governments of Europe, are grappling with the problem of alcoholic control.

It has been said that "diseases due to improper diet and habits of eating appear equal to that considerable evil of alcoholic intemperance" (Thompson), and that Providence is as stern in his displeasure toward the former as the latter. No figures are given. Such a suspicion does not arise at the workhouse. The judiciary have not thought it; they find 80 per cent of crimes due to alcohol, 6 per cent to heredity aside from alcohol. However scant or plentiful the table, men do not often rise in a frenzy to beat a wife, to butcher the babe, or to hang themselves. No villages of aborigines starve and freeze when pemmican and hardtack are their fiercest stimulants.

In the individual, as in the state, this condition is one of starvation and of degeneration. The withdrawal of the drug is imperative—no danger attends sudden withdrawal.

If one should select his progenitors 200 years in advance he should withdraw this drug

even earlier. By records of heredity, he could have neglected the first had he done the second.

Elimination of the drug and of tissue and other debris is best accomplished by internal lavage, by drinking water copiously, by emetics and by the stomach douche. The warm baths —massage and electricity—will, if repeatedly used, displace most of the sedatives. These promote nutrition which the sedatives do not. A cup of hot liquid food has often done what bromides and sulfonal had failed to do; yet these sedatives and hypnotics may be occasionally used. The hot broths may be well spiced with capsicum, and this drug may be given freely. I have given a dram of the tincture robbed of its alcohol, each two or three hours for several days, and the stomach remained unharmed. At Dr. Jones' instance, a man in typhoid state of delirium tremens believed to be dying, tongue and jaws immobile, pulse feeble, breathing noisy and irregular, we forced into the stomach a 20-grain bolus of capsicum. There was marked improvement in two hours; then gave five grains in milk each two hours with recovery.

The collapse of the doctor or nurse is sure to lead to the idea that "the hair of the dog that bit him" is the only resort. A treatment of alcoholism by true opposites was that used by Mr. Stocking of the City Mission upon a case that had resisted the Keeley and other cures. He took him home, coaxed him to bed, and soon read him to sleep with selections from the Bible. And here is also a moral: The patient yields to your measures when this hope of stimulants and narcotics vanishes definitely.

A large number of cases are restored to useful state in seven to ten days. When the degenerations are severe, a longer time is needed even for the partial cure that is yet possible; for the tissue changes are permanent and often progressive.

The information obtained in retreats as to causation and the success of treatment—30 per cent, indicates one source of relief applicable to very few. England has lately authorized state institutions; Canada anticipates the same. Illinois has authorized two asylums to be supported by tax upon the saloons. Germany has issued orders and established sanatoria for inebriated army officers. These retreats, as in Switzerland, should be compulsory to the victim. It is a very poor occupation to stand behind this car of Juggernaut picking up or entombing the wretched remains. We should at least be as wise as the aborigines of Madagascar, Hawaii and Iceland—adopt a true prophylaxis. To this end, education in the homes is needed. The full support of the family physician should be had by example and admonition.

Mrs. Helen Hunt has, with the aid of the W. C. T. U., placed the series of twenty-three temperance text-books before 16,000,000 children in the schools of forty-one states and all the territories. But with pro-liquor executors, this law is often defeated and one needs the patience of Kepler, who said, "Since God waited six thousand years for an observer, I can wait a hundred for a reader."

Whatever the view of causation, our obligation and the avenues of relief are yet the same.

Suppose alcoholism is the symptom of a deeper malady (contrary to the belief of all labor leaders, all social reformers, many statesmen and the United States Supreme Court), it is also a cause of other diseases and a stepping-stone to worse vices; "is worse than war, pestilence and famine." Do we hesitate to annul such a symptom because the disease is ill defined? In the treatment of the individual, his physician demands abstinence; he enacts prohibition or sends him to a retreat. The police court does the same. The workhouse is prohibition territory and has few crimes and misdemeanors and a low mortality. The Greeks, Mohammedans, Ireland in years 800 to 1000; Iceland, Hawaii in 1835; Madagascar, and of late years some of our states and many parts of states—in fact, one-half the whole South—have adopted prohibition. The alienists of Germany have abolished alcohol from the asylums; all the long list of our generals excepting Eagan gladly bid good-bye to the canteen.

As a restraint, the license system is evaded. There are 466 blind pigs and 532 licensed places in the District of Columbia. Under this system, the evil has inundated every civilized and most of the savage races, and the consumption of alcohol has steadily grown. England gets four million additional revenue yearly out of the increase; France used one and one-half quarts of alcohol per capita in 1850; in 1884 it was four quarts. The Emperor of Germany and the Czar of Russia see the failure of restrictive measures, so called, and are talking prohibition. The municipal trade societies of Scandinavia, who earn 125 per cent profit, pay

7 per cent to preferred stock, and the balance to charities, which again appeals to the avarice of the taxpayer and cripples his conscience. The earliest, the reasonable, the only, and the latest prophylaxis is banishment. Of course, "it won't work." The internal revenue office and the report of wholesale dealers showed a loss of eleven-twelfths of liquor sales in Iowa for a certain period. The court calendars and jails were empty in half the counties. The burnt district was almost a minus quantity at the capitol city. The governor of Connecticut, when that state was under prohibition, said, "There's scarcely a grog-shop in the state; jails fast emptying; there is a delightful air of security." The next seven years of license compared to previous seven years, commitments increased 82 per cent; drink and drunkenness, 111 per cent; breach of peace, 79 per cent; vagrancy, 129 per cent; and population, 12 1-3 per cent. Vermont has had this law forty-seven years and has less other law and need of law because of it. There are thirty-five police in the state; $11,600 is the total yearly cost of jails; there are but two houses of ill repute. Liquor causes immense loss elsewhere in prosecutions; Vermont gains $230,000 from prosecutions. There are more savings accounts in her banks than there are families in the state. The drummers say, "One can't get much to drink, but one can sell goods up this way, you bet!" The governor of North Dakota says, "We buy more pianos per capita than any other state; but best of all, our young people are strangers to the result of the drink traffic."

Alcoholism is not a disease of the few; we see in it the collapse of nations. In the wider sense abstinence is vain; we are not free who abstain. Admiral Tryon, 800 seamen and a five-million-dollar ship lie at the bottom of the Mediterranean as a result of moderation on his part alone.

The quest of science is the truth, and it is running alcohol to earth. Let us assign it to its proper place. Let the agent, alcohol, be removed from the home, the ways of trade, from the officers who carry more lives than our engineers, let it go to the poison shelf of the chemist.

We are warned that "worse evils will take its place." Is there a deeper pit whence they could spring? No nightmare of a disordered and outraged world can ever compare with this horror. No such evil, newly heralded, could share our tent, and, unmolested, bleed humanity of life and happiness. It will not come, and until it does, we are its prospective opponents as we are the enemy of the present usurper—alcohol.

ELECTRICITY IN THE TREATMENT OF SOME DISORDERS OF THE DIGESTIVE SYSTEM.

By LAFAYETTE W. CASE, M. D., Waterloo, Iowa.

Every physician of experience is aware of the fact that some of the most annoying cases he has to treat are those of the digestive system. He will therefore welcome any remedy or plan of treatment that offers better results than are usually obtained.

I shall speak of certain chronic and obstinate conditions that are frequently met with and which tax the skill and patience of the physician to the utmost.

The chief symptoms in these cases are pain, acidity, nausea, vomiting, flatulence and constipation. Together with these there are generally debility and a great variety of nervous symptoms which often seem to overshadow the digestive troubles.

Careful examination of the case will show that the symptoms mentioned above depend upon atony of the stomach, atrophy of the muscular fibres of the stomach, dilatation of the stomach, inaction of the glands of the stomach and intestines, or a condition approaching paralysis of some part of the alimentary canal.

For many of these conditions, I have during the past two years been using electricity in various forms. As my practice is limited strictly to sanatorium work I naturally have many cases of the kind mentioned and have made, during the time mentioned, not fewer than four hundred applications of electricity in various ways for their relief. My experience, based upon so large a number of cases, convinces me that a greater number of the very severe cases can be more surely cured by electrical treatment than in any other way.

In cases of atonic dyspepsia, dilatation of the stomach and similar conditions, I rely on internal application of electricity. The stomach should be empty, and it is therefore best to give the treatment several hours after a light meal. The patient is directed to drink a cup of warm water and a long, flexible stomach elec-

trode with perforated hard-rubber bulb is passed into the stomach. This is connected usually with the negative pole of the battery, and a spongio-pilene electrode from four to eight inches square connected to the positive pole is placed on the skin over the stomach and upper abdomen. The external electrode may be placed over the seventh cervical vertebræ or over the subclavicular region. I generally use from three to five milliamperes of the galvanic current for three to five minutes. In some cases I use the galvanic current for two or three minutes and follow it with a mild secondary faradic current for the same length of time, the same electrodes remaining in place and the same poles being used. In other cases I use the sinusoidal current, which contracts muscular fibres without much pain.

This internal treatment is given every second day. On alternate days an external application is made, the positive pole being at the back of the neck and the negative over the stomach. If there is much pain the positive pole may be placed over the stomach or other painful part of the abdomen.

In certain cases of vomiting which seem to be of a purely nervous character, cases in which there is no evidence of organic trouble and in which the stomach seems to be in a healthy condition except during these nervous attacks, electricity has been of very great service.

Some of these cases are purely hysterical, some are due to violent or too long physical exercise or to exhaustive mental efforts; some are due to the emotions, anger, joy, grief, anxiety, sexual excesses, etc.

In some cases the food is ejected immediately after eating and without nausea. There is then no more trouble until the next meal when the same thing occurs again. Of course, if this continues long the patient soon begins to show the effects of innutrition.

In other cases there is persistent nausea, frequent vomiting and the patient becomes rapidly reduced by the strain of vomiting and lack of nutrition.

Nearly all these cases of nervous vomiting can be readily cured by electrical treatment. In many cases external treatment alone is sufficient. The faradic current may be used, placing one electrode over the seventh cervical vertebræ and the other over the stomach. The former should be about four inches square, the latter six inches square. A mild secondary current is preferable. In severe cases better results are often obtained by using the flexible internal electrode with the faradic current alone, or both galvanic and faradic as described above.

The physician may be assured that the remedy will reach the affected part and is almost sure to produce beneficial results. This cannot always be said of drugs, for the mildest ones are often ejected immediately.

In many cases of indigestion the chief symptom is pain. This may be in the stomach, in the region of the liver, or in various parts of the middle and lower abdomen. It is not usually of a severe character, but is present nearly all the time. In such cases I usually employ the galvanic current, applying a spongio-pilene pad from four to eight inches square over the affected part and giving from five to twenty milliamperes of the positive current for five to ten minutes. The negative electrode may be applied to the back of the neck or other region. If the pain is confined to the region of the liver it is probably due to passive congestion of that organ, a frequent condition. In such cases I often use the interrupted galvanic, negative over the liver, with the most satisfactory results. Patients experience very agreeable sensations during the treatment and the benefits are usually permanent.

The obstinate constipation, which is so common in the chronic disorders of the digestive organs, as well as in chronic diseases generally, is often relieved by a sharp spray from a powerful static machine, or, where greater stimulation is necessary, by sparks drawn from the iliac region, especially the left. The spray is usually sufficient and is used for five minutes daily. On several occasions I have in this way caused one or more movements of the bowels within a few minutes after the treatment was given. I formerly used for this purpose the faradic current, inserting a metallic electrode in the rectum and with a spongio-pilene electrode attached to the other pole applying massage over the course of the colon for five or ten minutes daily. I have also used the sinusoidal current in the same way, and while both methods give very satisfactory results, the static method is preferable. Patients appreciate the advantage of not being obliged to disrobe.

Naturally, during the treatment of any form of indigestion, whether due to organic disease or not, the patient should be placed upon a suitable diet. After a cure has been effected he should avoid the causes that have operated in the first place. Neither electricity nor any other remedy will keep a person from getting sick if he transgresses the laws of health.

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THE INSANE IN THE ANTILLES.

Dr. G. Alden Blumer, superintendent of the hospital for insane at Utica, N. Y., relates in the April number of the American Journal of Insanity, of which he is one of the editors, his experience in a recent visit to the hospitals for insane in the Antilles.

The first visit was made to the Orphan and Lunatic Asylum under the immediate control of a Roman Catholic sisterhood, at San Juan, Porto Rico. The mother superior rather reluctantly, and with many apologies, "led the way into the men's quarters." The building is described as unlike anything of the kind the doctor had ever seen before. "The rooms opened in quadrangular fashion on to a spacious court, and on its four sides were arched corridors. A well occupied the central space. The rooms, with massive iron-bound doors, like those of a mediæval castle, were dark, gloomy, and foul,—without sanitary conveniences, or beds."

The doctor says: "The occupants of these rooms were naked, filthy, and the spectacle sickening; but the mother superior expressed pity in voice and gesture for these wretched creatures, and some of the women patients seized and kissed her hand in evident affection. The male attendant who accompanied appeared kind and distributed tobacco freely to both men and women while his supply lasted." A few women were sewing in the corridors; but the men were apparently without employment. From a window there was a beautiful view of the harbor—when the shutters were opened. The chapel was clean, and the drinking water was filtered. This is the only favorable criticism that the doctor could make of this noisome place, where fifty-six insane patients were literally confined.

In the Danish colony at Charlotte Amelia in St. Thomas, fourteen insane men and women were found in the barracks. No pretense seems to be made to care for them according to modern methods. In the absence of the physician, the honors were done by "a kindly but consequential negro, with a remarkable fondness for long words." The insane were herded with sick folk—in a one-story wooden building, containing both male and female patients. The rooms had no furniture worthy the name, and the patients wore little clothing, or none at all. In some of the rooms there was a heavy ring in the middle of the floor, which the negro explained was for punishment, adding, "You see, sah, the doctor has shown great partiality to these patients at times, and they have taken undue advantage of him, sah, so that it is sometimes necessary to have recourse to hostilities."

The asylum at Bridgetown, Barbados, was visited, and here the experience was different. The superintendent, Dr. Field, was found reading Plato in the original Greek. This is not so much of a surprise when we are told that the Barbadoans are often highly educated, especially as classical scholars; seven English bishops, at one time, having received their education at Codrington College, Barbados; and the professor of Roman history in Basenose College, Oxford, and the master of Exeter College—both being Barbadoans, educated in native schools.

In this asylum there is intelligent care. There were 346 patients, equally divided as to sex. The rooms were spacious, with abundance of air, the floors of pine or cement, clean, and the walls whitewashed, the plumbing modern, and good, the kitchen roomy and clean.

The furniture is plain. No pictures were to be seen, and few comforts that are usually found in modern asylums; but such articles or luxuries are not common in the households of the people there.

Cases of paresis and paranoia are uncommon, but epileptics and idiots abound. Canvas stretched tightly on a frame is used for a bed, and covering is rarely necessary. The patients, naturally lazy, do very little work. Dr. Field said: "If they do not choose to work, they are provided for." Under such liberal and encouraging Barbadoan laws, it would seem that the country would be a paradise for tramps.

All the medical work of this hospital is done by the superintendent himself, who prefers not "to bother with an assistant." For the 346 patients he has thirty attendants and one head attendant. The women are paid from $7 to $10 per month; the men, $8 to $12; the head attendant's salary $300; and the steward's, $500. For the evening meal they had ginger tea, and the food is largely fish and vegetables, such as rice, yams, squash, ochra. All patients are discharged upon a twelve months' parole, and there is a requirement that a post-mortem shall be held by an outsider in the case of every death, for which service the officiating physician gets a fee of three guineas. The final comment is, "that the patients looked well and appeared contented."

March 16, St. Pierre, Martinique, was visited, and the so-called "Maison Coloniale de Santé" inspected. The Martinique blue book says of this place that nothing has been neglected to bring it abreast of the best institutions of France.

On inspection of the premises the facts appeared quite otherwise. The senior visiting physician, Dr. Morestin, a general practitioner of St. Pierre, reported the owner of the establishment to be one M. Delatouche, "propriétaire de la France." The director is named by the local administration and paid by the proprietor. There were two visiting physicians in charge of the men and women, respectively. Private patients paid according to their means, and a fixed rate was charged for those maintained at public expense. There were about 200 patients, of whom only eight were white. The visiting physician prepared Dr. Blumer for what he was to see the next morning, speaking of the restraint chair, and the infernal noises that might be heard, owing to the "electricity of the air" or the "ozone" that excited them. Dr. Blumer says "that it seemed to him that in the island of Porto Rico the lowest grade of care had been reached, but this so-called 'house of health,' to translate literally, the French euphemism for asylum, was infinitely worse in every particular. It is impossible to convey in words a picture of the horror of it all." The structural arrangements were like those of the San Juan asylum, but in worse repair, and the number of patients in the most barbarous restraint, the doctor would not trust himself to estimate. In the damp, dark, vaulted cells, with great, ponderous doors bolted, barred and locked, were chairs secured to the floors, in the seats of which were holes, and on these were pinioned naked patients with an iron rod through the arms of the chair in front of the patients, with spaces between the rods and the back of the chair sufficiently narrow to prevent movements of the body, but leaving arms and legs free, unless, as sometimes happens, camisoles are used as an additional precaution. The bodily cleanliness can be imagined. In some cells two planks from wall to wall, supported on cleats, served as beds. "They all seemed to live a common life [those at liberty] with the animals about the place, pigs, dogs, poultry, men, all huddled together in the greatest confusion, with little oversight on the part of attendants. One woman was restrained to an iron bracket with what looked like a length of canvas fire-hose, because she pulled out the feathers of the chickens and ate their eggs." But worse than all was the so-called salle des douches. The patient, restrained in a chair, a stream of water an inch thick at high pressure is let fall on his head, while an attendant plays upon his body with a hose from another quarter of the room. The effect of this treatment when a patient is "michant" is said to be "all that is desired."

The Lunatic Asylum at Kingston, Jamaica, was found in refreshing contrast to the conditions above described. Dr. J. W. Plaxton, the superintendent, is an old West Riding assistant, and has also seen service in Ceylon, and Dr. Williams, one of his assistants, had been trained at Hanwell and other British asylums. There were 776 patients in accommodations for 600; but a new building was nearly completed to care for the surplus. The patients' quarters were clean and the ventilation excel-

lent, and everywhere an absence of odor. They have a good shower bath for patients, as well as other modern means of sanitation. There were many coolies, and they are said to show a tendency to insanity of melancholic bias, and their number is out of proportion to the number in the colony, the explanation being that the men were of unstable brains when they left British India to engage in contract labor in Jamaica. A few cases of leprosy, several cases of leucoderma, and a number suffering from skin affections, involving chiefly the feet, were seen. Deaths from pulmonary disease were said to be numerous, isolation being difficult. There was one case of death last year from yellow fever. General paresis and paranoia are rare. The attendants are said to be of a low order of intelligence, and their ideas of morality of the "crudest kind, a woman being in disfavor with her sex, including herself, until she has demonstrated her capacity to reproduce the species." One attendant, it was said, "who remained chaste was stigmatized by her fellows as a hermaphrodite, and so plagued by them that she was compelled to leave the service. The only advantage which the married relation appears to offer from the point of view of the Jamaica negro is that it permits the couple formally to join the church."

There were twenty-seven patients, thirteen men and fourteen women, at the quarters for insane, at new Providence, Nassau, when visited. They form part of a general hospital, so-called asylum, for the sick. "Little or nothing was done for the men, who were comparatively quiet, cases apparently of dementia." The colored man in charge showed his notes with evident pride, from which the doctor learned that "Samuel Bowleg continues silly and worrysome," and that "Shadrach Wemyss continues quiet and rational." The accommodations for women were not in keeping with the others. Four were found in seclusion of the worst kind, "confined behind heavily barred and bolted doors, noisy, profane and obscene." A new building for men had just been finished.

From these reports of the condition of the insane in the Antilles, it would appear that another D. L. Dix is necessary to help them in their sufferings and instruct their keepers in the modern ways of treatment.

TYPHOID BACILLUS IN MILK.

The germs being in milk before churning are found in butter three months later. They do not multiply in butter if the butter milk has been well removed, but if left in this furnishes an excellent medium for multiplication. In sterilized milk, typhoid bacteria can exist for upwards of four months. Inoculated into freshly drawn milk they have been found after three months. Inoculated into sour milk they take complete possession thereof and become almost a pure culture.—Am. Microscopical Journal.

MOSQUITOES AS TRANSMITTERS OF DISEASE.

The probability of disease being carried by insects from sick to healthy human beings has been receiving considerable attention of late. On this question a contribution by Dr. Charles J. Finlay in the Medical Record for May 27 is of special interest. The biological conditions and the habits of mosquitoes have received special attention and this line of study has thrown light upon the important role which these troublesome insects play in the etiology and propagation of malarial infection. One of the essential conditions appears to be that the transmitting insect should itself experience a true infection, which may not endanger its life nor greatly disturb its physiological functions, but must always require, on the part of the insect, pathogenous susceptibility for the specific germs which it is called upon to transmit. This perhaps explains why the same insect may transmit only certain germs and not others; as also, that, among insects of the same kind, some species may possess that faculty, while others do not.

In 1892, Dr. Theobald Smith, chief of the division of animal pathology in the United States Bureau of Animal Industry, settled the question of the propagation of Texas fever in cattle. He proved that the germ of the disease is a blood parasite, and that it is propagated by the cattle tick. The germs sucked in with the blood of diseased cattle infect the eggs of the insect, and the new generation of ticks, developed from the infected eggs, caused the Texas fever in the sound cattle upon which they are applied. A tick is not supposed to attack a second animal after parting from its first host. The disease is only propagated through the second generation of ticks, that is, the offspring from the infected eggs.

Koch repeated and confirmed, in eastern Africa, the experiments of Dr. Smith, and came to the conclusion that mosquitoes are so closely associated with the spread of malaria that they are responsible for the propagation of the malaria infection. He does not agree with the idea that malaria can be communicated simply by a mosquito first stinging a malaria patient and afterward a sound person. Dr. Finlay, from observations of mosquitos in Havana, says: "After an interval of two or more days, which they require to digest the blood and empty themselves, they are ready to sting the next victim that presents himself, and may do so as many as ten or twelve times, during the thirty or more days that I have been able to keep them alive. It is therefore quite admissible that, when the mosquito becomes contaminated, not only its eggs, but also its salivary glands may be invaded by the pathogenous germs, so that the latter may be discharged with the secretion of those glands along the

track of the wound and into the capillary vessel entered by the sting when the insect attacks its next victim. Indeed on some rare occasions I have seen mosquitoes die within twenty-four hours after they had stung a patient with severe yellow fever, without assignable cause, for they still retained some of the blood which they had sucked; whence it might be surmised that the yellow-fever germ is pathogenic for the Havana mosquitoes, though the infection seldom proves fatal for those insects."

While Koch was ready to assert that "where there are no mosquitoes there is no malaria," Finlay thinks this assertion is altogether too absolute. In August last, during his stay in the field hospitals on the hills near Santiago, there were neither mosquitoes, mosquito eggs, nor larvæ to be found in the encampments, and not a single case of yellow fever occurred among the one hundred and fifty men who came under his observation, notwithstanding the daily communications with the city. It was otherwise in regard to malaria, for this constituted the prevalent cause of sickness in all those camps. Dr. Finlay sums up the results of his experiments on yellow-fever mosquitoes as follows:

1. Reproduction of the disease, in a mild form, within five to twenty-five days after having applied contaminated mosquitoes to susceptible subjects.

2. Partial or complete immunity against yellow fever, obtained even when no pathogenous manifestation had followed those inoculations.

3. The coincidence of cultures made with the heads and proboscides of contaminated mosquitoes giving the identical micrococcus in tetrads (M. tetragenus febris flavæ; M. tetragenus versatilis, Sternberg; teracoccus versatilis) previously discovered by him in collaboration with Dr. Delgado, in the blood and secretions of yellow-fever patients.

If the mosquitoes and other insects are such enemies to man, is there any way by which we can protect ourselves against these disease-bearing creatures? Koch suggested that the German colonies of eastern Africa might be freed from malaria by the construction of dwellings from which mosquitoes might be barred out. In this country no difficulty is experienced in keeping mosquitoes and other flies out of our dwellings, and what we do for simple comfort the inhabitants of tropical countries ought surely to do, since with them it might be a question of life or death. Dr. Finlay suggests that the mosquito larvæ might be destroyed in swamps, pools, privies, sinks, street sewers and other stagnant waters, where they are bred, by a methodical use of potassium or other such substances, in order to lessen the abundance of mosquitoes; but above all, those insects must be prevented from reaching yellow-fever or malarial patients, and a proper disinfection of all suspicious discharges must be secured in order to forestall the contamination of these insects. Hospitals should be well ventilated and should occupy high grounds, with no stagnant waters nor marshes in their vicinity, the doors and windows protected by mosquito-blinds, and there should be facilities for disinfecting all suspicious discharges, and for destroying all mosquitoes and larvæ from within the building. The sick should only occupy the upper stories, and none but yellow-fever patients and such malarial patients as are immune against yellow fever, should be admitted. The examination for admission should be carried on in a separate building.

With such hospitals, efficient boards of health, and improved sanitary conditions around cities, Dr. Finley sees no reason why yellow fever cannot be stamped out of Cuba and Porto Rico.

Reports of Societies.

Hennepin County Medical Society.

The regular monthly meeting of this society was held at the Public Library, Minneapolis, May 1st, 1899.

In the absence of the president, Dr. C. G. Weston took the chair.

The names of Dr. Mary Towers, Dr. L. W. Day and Dr. J. F. Corbett were reported favorably by the Board of Censors, and the name of Dr. R. D. Greenlee was presented for membership.

Dr. G. D. Haggard of Minneapolis read a paper on "Alcoholism, Its Causation and Treatment." (See preceding pages.)

DISCUSSION.

Dr. C. G. Slagel—Mr. Chairman: The paper is good, but more suited to a temperance meeting. It would seem to advocate the banishment of alcohol from medicinal use. The views and the statistics are biased, are one-sided and extreme. No man to-day knows the action of alcohol. I knew beforehand the author of the paper would quote Richardson and Kellogg. I do not know that Richardson is any authority. I know Kellogg personally; he is cranky on this subject as he is on that of meat eating. I am an abstainer when well or moderately sick. Alcohol is our best antidote for septicæmia diphtheria and in tuberculosis. Forty years of practice confirms this opinion. If I had phthisis and were to select from a full pharmacy that flask by which to live longest, it would not be cod liver oil, it would be rye whisky. All things venomous are found in Texas, yet rarely a death therefrom, because of the good, old remedies, whisky and turpentine.

Alcohol is indispensable in pneumonia. It has no place in health.

Dr. Mary Whitstone—I wish to commend the paper. Some of my professors used alcohol personally yet their teaching and general voice decried its use in medicine, and one of those who had long used the drug said the world would be infinitely better off without it. It destroyed much more than it benefited. I do not use the agent. The phthisical should be allowed to die sober.

Dr. Phillips—I am as old as Dr. Slagle and an abstainer and as good a judge of whisky. Have given to patients large quantities of alcoholics, a pint a day or more. Have used it in sepsis and diphtheria. Some did and some did not die. I can't tell whether the disease or alcohol killed them. The drug has a stimulant stage easy to exceed and damage results. It is a two-edged sword. The government attitude is wrong.

Dr. Greenlee (Minnesota Soldiers' Home)—I have been interested in this subject. I wish to commend the paper. In replacing alcohol by tincture of capsicum, more alcohol than capsicum is given. If the writer would be fine-haired he should give capsicum straight. Our unfortunate old soldiers afford a large experience in the treatment of alcoholism, as alcohol is the most potent cause of their deplorable state. I have abandoned alcohol in our hospital even with the habtiue, and have succeeded. It is a strong test. I have always doubted the stimulant property ascribed to alcohol. It is not as the public seems to think, needful, that the old soldier should have all the liquor his skin will hold. Since age comes and he must die, let him die sober and in a proper mind. In weakness use strychnia. In shock alcohol is a damage, the surfaces get colder and more clammy and the pulse weaker.

I want to say to Dr. Slagle: The prolongation of life he observes is due to stimulation by Minnesota air. I have years ago used alcohol in diphtheria on the doubtful ground that this dreaded poison should be met with its equal. Alcohol is of no use in septicæmia or heart failure. Medical men have done great harm through thsi drug. The sale of it in the army has caused more deaths than any other cause; beside those of drunkenness and vice, men were made careless, and this was a predisposing cause of the scourge of fevers. Many of the older army men are drunkards—this tells what the younger will be. The head of the government should stop it.

HE SPOKE TOO LATE.

Boarding-House Mistress (discussing Eagan)—"Well, that's the end of the embalmed beef, anyway."

New Boarder (slightly deaf)—"No more, ma'am? I was just going to ask for another plate."—Judge.

Progress of Medicine.

OBSTETRICS.

UNDER THE CHARGE OF

A. B. CATES, A. M., M. D. R. E. CUTTS, B. S., M. D.

ANTENATAL THERAPEUTICS.

In speaking of the antenatal cause of morbid state, Ballantyne (Brit. Med. Jour., April 15, '99) insists that it is quite probable the same causes are at work as in the post-natal epoch; that, in other words, the agencies which produce pathogenic and toxic effects when acting upon infantile and adult organisms lead to pathogenic and toxic effects when acting upon the fœtus and to teratologic results when acting upon the embryo and germ. He also believes that the morbid causes are many and that all the toxic and pathogenic agents which have a known effect on post-natal life may act before upon the developing organism. In this way alcohol, lead, morphine, nicotine, etc., and the microbes and their toxine may be causative factors in any antenatal morbid condition. The same cause may produce in one instance a fœtal disease, in another an embryonic monstrosity and in another a breaking of normal heredity in the development of a proneness to certain maladies of body or mind in later life. In some, this same cause may produce sterility, embryonic or fœtal death, possibly twinning, and certainly abortion and premature labor. These protean effects are most frequently produced by syphilis, tubercle and alcoholism. It is quite probable that the real causative factor is one of interference with nutrition; and that the modus operandi of the morbid causes must be considered as the arrestment of normal processes.

In speaking of the antenatal death roll, Ballantyne says mortality tables tell something of the frequency of death during the early months of fœtal life, and obstetricians know something about the number of premature labors, still births and abortions, but he doubts if the most pessimistic has an adequate conception of the loss of life during the first three months of pregnancy. Registration of still births is recommended, and this in time would necessitate necropsy, which would be of great value in ascertaining the causes of the intra-uterine death.

It is not only antenatal death which has to be considered, but the antenatally wounded, crippled and diseased. Taking all into consideration, there is certainly need for antenatal therapeutics. As to post-natal treatment of antenatal morbid conditions the results achieved by the orthopedic surgeon are referred to in the treatment of deformities, while medicine has given great relief in syphilis and cretinism.

The post-natal treatment of idiocy by craniectomy is spoken of as unsatisfactory since, as Blane has said that, in primitive microcephaly, the arrest in brain development has occurred before the fourth month of fœtal life, and that therefore the post-natal operation does not relieve the condition which developed early in uterine life. In cases developing the trouble later, the operation is more successful. By internatal treatment is meant the care and management of the infant during labor, both while in the uterus and in the vagina. The prophylactic vaginal douche during and before labor is suggested for the prevention of gonorrhœal, septic or syphilitic infection of the eyes, mouth or lungs. The value of the prophylactic douche has not been fully appreciated.

Antenatal treatment is primarily maternal treatment. It must be so since it must pass through the placenta. The transmission of medicines by the placenta is imperfectly known; however, we do know of the beneficial effect upon the unborn when mercury is given to a syphilitic mother. Yet the mercury is entirely stored up in the placenta. Hence the benefit to the fœtus is simply due to the fact that the mercury keeps the placenta healthy. Besides mercury, iodide of potassium, quinine, potassium-chlorate has been found of benefit in cases in which there has been a tendency to abort.

Infectious diseases should be avoided by the pregnant woman, since it has been shown that such diseases as smallpox, scarlet fever, measles, erysipelas, etc., may not only be transmitted by the mother to the child in utero, but that she herself may be immune to the disease and not take it, but that the fœtus may become infected and afterwards born with the effects of the disease apparent. Further, the danger of deformities as well as death of the fœtus resulting from the infectious diseases are pointed out. Likewise the effects of poisons, viz., tobacco, lead, copper, alcohol, etc. Under puericulture, the writer says, the better the hygienic conditions that exist during pregnancy the better developed and healthy will the offspring be. As to maternal impressions during pregnancy, it need only be said that it is inadvisable for the mother to be subjected to unpleasant emotions, and that she ought not to be allowed to brood over disgusting or terrifying sights. R. E. C.

INTERESTING RELICS.

One hundred and ninety-nine different surgical instruments have been found in the ruins of Pompeii, which are now preserved in the national museum at Naples.—Med. Bulletin.

The Mississippi Valley Medical Association will meet in Chicago October 6 to 9, inclusive, instead of September 12 to 15, as heretofore announced.

Neurology and Psychiatry.

UNDER THE CHARGE OF

R. O. BEARD, M. D., W. A. JONES, M. D.

PHOCOMELUS OF THE HUMERUS IN EPILEPSY AS A STIGMA OF DEGENERATION.

Under the above title, L. Pierce Clark, M. D. (N. Y. Med. Jour., May 13, 1899) discusses at length the use of the term phocomelus, and the few references in literature which refer to shortening of one humerus among epileptics. He then describes two cases in the care of the Craig Colony at Sonyea, N. Y.

Case 1 is a girl of nineteen, who developed epilepsy at the age of four. Patient was a full-term child, delivered with instruments after a prolonged labor. She was injured on the left side (probably birth palsy) and had several convulsions after birth, as well as at the time of dentition. When about three or four years of age she had severe convulsions which ended in left-sided hemiplegia. Her attacks for many years were confined to the left side, and always began there. Her attacks are almost always preceded by epigastric aura, a fact fully recorded by Gowers, namely, that hemiplegic epilectics may after a time develop aura similar in all respects to those occurring in idiopathics. In this case the right arm is in all respects normal except in length, which shows a shortening of three and one-half inches as compared with the hemiplegic left side.

Case 2 is a woman of twenty whose epilepsy began at the age of eighteen and a half years. Patient born at full term, labor not prolonged, and terminated naturally. At two years of age right knee became painful, and after some time amputation just above the knee was performed. From the descriptions of the relatives this process was doubtless tubercular. The right arm was noticed to be shorter at this time, but she had perfect use of the limb, which is still maintained. Measurements made by Clark show the right humerus to be four and one-half inches shorter than the left. The condyles are much enlarged and protuberant, and the lines running from shaft to condyles were proportionately shortened. W. A. J.

CONGENITAL ATROPHY OF THE CEREBELLUM.

C. G. Hubbard, M. D. (Jour. of Amer. Med. Assoc., May 13, 1899): Mrs. M., 37 years of age, had previously borne six children, all but one of which were delivered at the seventh month. The seventh child, a female, was also born at the seventh month, weighing five pounds and thirteen ounces, and well-formed in every part, except that from the lower part of the occipital bone there hung a sac three inches long, two

and three-quarters inches wide and one-half inch thick. The sac was filled with cerebro-spinal fluid and communicated with the cranial cavity through a nearly circular opening in the bone about one inch in diameter. The lower border of the opening just touched the foramen magnum, but there was no loss of substance of any part of the spine. The remainder of the head was well formed, but its bones were more movable than usual.

When the child was one week old the sac was aspirated, and six ounces of fluid withdrawn. After the sac was emptied there was found to be quite an absence of brain substance. Fully one square inch of bone was lacking. The finger could be swept around under the bone within the cranial cavity, one-half inch beyond the margin of the opening in every direction except downward. The sac refilled and was retapped. After the third tapping the child lay in a semi-comatose state for two days, and later tappings showed a marked increase in the atrophy of the cerebellum. The seventh tapping caused so much irritation that their further use was abandoned, and shortly thereafter the head began to enlarge and show the appearance of hydrocephalus.

The child died at four and a half months, and a partial autopsy showed the presence of over two quarts of cerebro-spinal fluid. The opening in the occipital bone was centrally located directly over the foramen magnum, touching the latter at its upper margin. The cerebellum was so atrophied that its right hemisphere was scarcely half an inch in diameter, the other hemisphere a trifle larger. The cerebrum was also atrophied, but not to so great a degree. W. A. J.

POSITION IN SLEEP; A PRINCIPLE IN NEUROLOGICAL THERAPY.

Dr. William Browning (N. Y. Med. Jour., May 6, 1899) divides people into three classes according to the position assumed by the head in sleep.

1. The medium class, who use an ordinary or thin pillow.

2. Those who sleep with the head higher than this standard.

Some of these, who have been mentally occupied just before retiring, begin the night with the head high, and end it with the head medium or low. In this class also belong cases of excitement, mental over-activity, mania; also a proportion of neurasthenics, epileptics, and nondescripts; besides many persons who present no nervous disturbance.

Cases of various diseases and conditions—such as valvular disease, etc., which cause the patient to rest with the head high—are of course to be excluded.

3. Those whose habit it is to sleep with the head lower than the average standard.

In this class the sleep is usually profound, and they crave an extra amount. They incline to wake drowsy, tired and exhausted, and if inclined to headache, this is present and often most severe on waking. With this class cold feet are not the great impediment to sleep that they are when present in class 2.

The author suggests that when ill the third class are most benefited by remedies that are essentially or casually excitants and tonics, such as nux vomica, digitalis, the valerianates, increase of body fluids, alcoholic stimulants, iron, overfeeding and rest. On the other hand, depressants, whether hypnotic or otherwise, are of little value.

In class 2 all this is reversed, and depleting and depressing remedies are to be chosen, such as atropine, hyoscine, chloral, bromides, sulphonal, warm baths and sweat cures, diaphoretics, hard work, etc. But all excitants, stimulants and tonics are contraindicated.

W. A. J.

Book Notices.

DISEASES OF THE EAR, NOSE AND THROAT AND THEIR ACCESSORY CAVITIES. By Seth Scott Bishop, M. D., D. C. L., LL. D., Professor of Diseases of the Nose, Throat and Ear in the Illinois Medical College; Professor in the Chicago Post-Graduate Medical School and Hospital; Surgeon in the Post-Graduate Hospital; Consulting Surgeon in the Mary Thompson Hospital, to the Illinois Masonic Orphans' Home, and to the Silver Cross Hospital at Joliet; formerly Surgeon to the South-side Free Dispensary and to the West-side Free Dispensary; one of the Editors of the Laryngoscope, etc. Second Edition. Thoroughly revised and enlarged. Illustrated with ninety-four colored lithographs and two hundred and sixteen additional illustrations. Philadelphia, New York and Chicago. The F. A. Davis Company.

Dr Bishop's book is especially adapted to the use of general practitioners and students. It is well written and more than ordinarily well illustrated by lithographs and engravings. It is not encumbered by descriptive anatomy. Particular attention has been paid to details in the treatment of the various diseases. The chapters on the mastoid diseases cover thirty-four pages and are especially valuable. Prominence is given to the subject of hay fever, the opinions of thirty writers on the pathology of the disease having been gathered and presented. The author gives a description of the method of "Direct Laryngoscopy," to which much attention has been directed during the past two years by the profession. This particular edition is at least a fourth larger than the former edition, and the mechanical execution of the work is excellent.

AN EPITOME OF THE HISTORY OF MEDICINE. By Roswell Park, A. M., M. D., Professor of Surgery in the Medical Department of the University of Buffalo, etc. Based upon a course of lectures delivered in the University of Buffalo. Second Edition. Illustrated with portraits and other engravings. Six and one-half by nine and one-half inches. Pages xiv–370. Extra cloth, $2.00 net. The F. A. Davis Co., Publishers, 1914–16 Cherry street, Philadelphia.

This work is a shrewd compilation, giving in a condensed form the substance of many able works written in the eighteenth and nineteenth centuries. For the student of medical history who has abundance of time, it would be better to travel patiently over wider fields and drink deeply at larger fountains; but as time is an element of the first consideration, a work like the one before us, with its 370 concise, yet forceful and ably edited pages, the vital spirit which animated the souls of many giant thinkers, is invaluable to the busy, up-to-date practitioner.

SAUNDERS' MEDICAL HAND ATLASES. Atlas of the Diseases of the Skin, including an epitome of Pathology and Treatment, by Prof. Dr. Franz Mracek of Vienna, being an authorized translation from the German. Edited by Henry W. Stelwagon, M. D., Ph. D., Clinical Professor of Dermatology, Jefferson Medical College, Philadelphia; Physician in the Department for Skin Diseases, Howard Hospital; Dermatologist to the Philadelphia Hospital, etc. With sixty-three colored plates and thirty-nine full-page halftone illustrations. Philadelphia: W. B. Saunders, 925 Walnut street. Price, cloth, $3.50 net.

If the practitioner is in search of a book which gives skin diseases in a helpful and concise form he has it in this compact little volume. In 191 pages of reading matter the various diseases are described in a clear and forcible manner. Then follow sixty-three colored plates and thirty-nine full-page halftone illustrations, presenting vivid and truthful pictures of cases as they occur in actual practice. So lifelike are these plates that it seems impossible for any one to have any difficulty in recognizing the counterpart of each when seen on the human skin.

The sale of this series of atlases has been phenomenal. Starting out with a contract for the sale of 100,000 copies, the calculations of the publishers have been so far exceeded that it now looks as if the sale would reach 200,000 copies.

THE AMERICAN ELECTRO–THERAPEUTIC ASSOCIATION.

The ninth annual meeting of the American Electro-Therapeutic Association will be held in Washington, D. C., on September 19th, 20th, and 21st, 1899, under the presidency of Dr. F. B. Bishop, of Washington.

Quite a number of papers of great scientific value have been promised, and the committee of arrangements insures the members a very entertaining and pleasurable meeting. Aside form the sessions of the association, the committee has completed arrangements for a trip to Mount Vernon, one to Arlington, and several other social features.

The headquarters of the association will be at Willard's Hotel, where special rates will be given to members and their families during the meeting.

It is announced that the American Medical Editors' Association and the American Medical Publishers' Association will hold a joint session during the congress of physicians in Columbus, Ohio, June 6 to 9.

THE PUEBLO OF TAOS, N. M.

CORRESPONDENCE.

To the Editor of the Medical Dial:

Dear Sir—The following letter was addressed to a strong, healthy, young married man, the father of one child. He suffers no disease excepting constipation, which he thinks due to some rectal trouble. I have never been able to find any trouble, and as he has been examined by a number of good physicians who have found no trouble with the rectum, I am inclined to think it entirely neurotic.

With this explanation I present this as an unique piece of medical literature worthy the profound consideration of the profession.

GEO. C. BARTON, M. D.

Dear Sir:—

Your letter enclosing Symptom Blank is at hand, which has been carefully examined by our physicians.

We find that if you will act promptly and thoroughly now, a cure can be effected; but delays are dangerous, as the trouble will rapidly grow worse if not rightly attended to. Your case is one which will in time assume a form which is past human aid, unless treated properly at once.

It is apparent you lose the semen to a great extent with the urine during the day, which you can easily find out for yourself if you choose to do so.

VIEW OF MT. FRANKLIN, EL PASO.

Put a small quantity of the urine, which should be passed upon rising in the morning, into a bottle and allow it to stand for a day or so in a warm place. If you notice a misty or cloudy substance suspended in the urine, you may be sure that it is the semen, which you are thus losing daily, and there is nothing known which will wreck the health so soon, or which will cause as many serious consequences, as this excessive and unnatural loss of the vital principle of the blood.

This is the sad condition in which we find the majority of sufferers from sexual weakness, and, although some are inclined to make light of such matters, yet this is a subject to which should be given the most careful consideration.

If neglected this trouble nearly always results in some fatal or dread disease, as "consumption," "Bright's disease," or worse still—"insanity."

We have in the above paragraphs attempted to portray the evils resulting from negligence and delay in cases as serious as yours.

You yourself know better than we can tell you the causes which have reduced you to this unenviable condition. We shall now enter more minutely into your case and will tell you how you may be completely restored to "perfect manhood."

As per your answers to the questions on our Symptom Blank, we find you are afflicted with the following troubles, viz.:

"Spermatorrhœa," includes losses of semen in the urine during the day, general nervous debility, etc., for which we prescribe Course "A."

"Involuntary discharge" is the unnatural loss of the seminal fluid, generally occurring at night, as the result of lewd or unholy dreams. Course "C" is our cure for this form of sexual weakness.

"Varicocele" is a swollen, enlarged condition of the veins in the scrotum, and is successfully treated by our Course "E."

"Defective power" is a peculiar condition and one to which most men are subject. It is the inability to discharge at the proper time during intercourse. We prescribe Course "F" for this condition.

"Atrophy" is a shrunken or undeveloped condition of the sexual organs. It is, indeed, a humiliating condition, but one which is, however, very common. Our Course "H" is a perfect cure for this trouble.

What you require, therefore, is a combination treatment composed of Courses A, C, E, F and H, which are all described fully in our book, which we have sent to you this day by mail under separate cover.

The examination of the urine from the medicated paper constituted the most striking and characteristic feature in the diagnosis of your case. The character of the test slip of Litimus paper when it reached us indicated an abnormal alkalinity of the above mentioned fluid, due to an excess of carbonate of ammonia and sulphate of sodium. This led us to suspect some grave disorder of the bladder, which was verified when, upon application of heat, we discovered a dark coagulum of ropy mucus, which, when examined under the microscope, proved to be composed chiefly of pus, corpuscles, hæmagloben and transitional epithelial scales. This savored strongly

TESQUE INDIAN VILLAGE.

of chronic cystitis or catarrh of the bladder. Still we were convinced that even if this condition were present, it was a symptom of a far more important pathological process going on above, viz., in the kidney, and we made our test accordingly in that direction.

By chemical analysis we discovered albumen in excess, together with many equally abnormal organic substances as globulin and various biliary acids, while hypo-xanthin, oxaluric acid, kreatinine, leucin, gaurin, etc., were markedly apparent. The above conditions, taken together with the subjective symptoms on the sheet, strongly indicate an incipient degeneration of the genito-urinary tract.

In preparing the treatment for your particular condition, we shall take all possible pains to include such ingredients as will effectually rid your system of the above very dangerous symptoms.

"There are just as good sea serpents in the sea as have ever been seen."—Puck.

Jagging Jim—"'Ello, Slumpy! Wat's de matter wid yer face and hands? Got de hives?"

Slumpy—"No—got de bees."—Judge.

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HYDROGEN DIOXIDE, U. S. P.

"THE KIND THAT KEEPS."

A positive and harmless antiseptic and germicide for internal and external use.

Highly recommended in the treatment of diphtheria, scarlet fever, and other contagious diseases.

As a prophylactic in preventive medicine it is without a peer, and may be used lavishly or sparingly according to indications without a suspicion of harm resulting from its use in any application.

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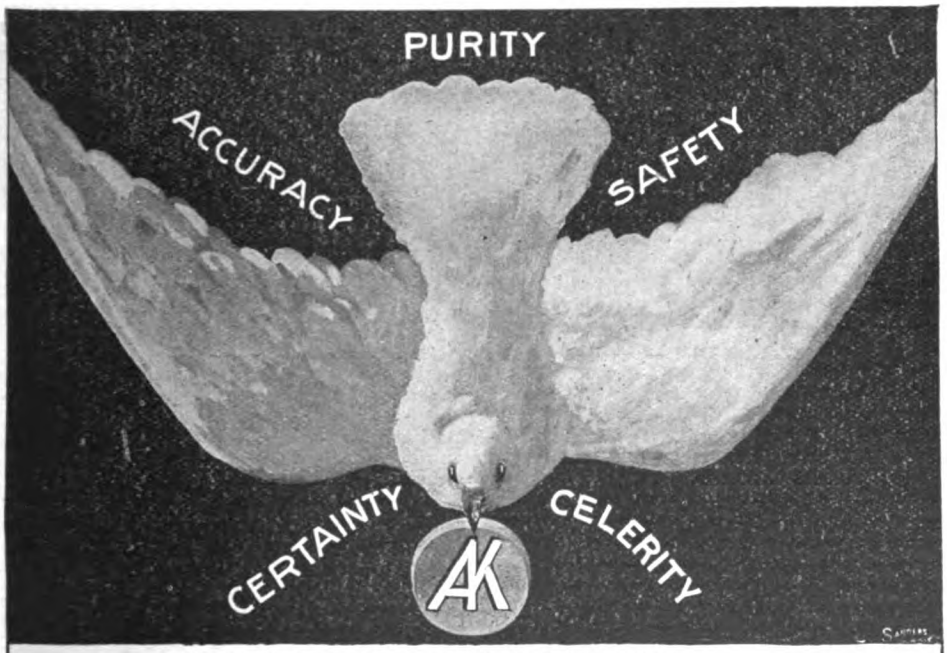


"That Gentlier on the Spirit Lies,
Than Tir'd Eyelids on Tir'd Eyes"

SAMPLES ON APPLICATION TO THE ANTIKAMNIA-CHEMICAL CO., ST. LOUIS, U. S. A.

PUBLISHER'S DEPARTMENT.

FAMILIAR CLINICAL PICTURE.

One of the most common class of cases is that in which there are no well defined characteristic symptoms of organic disease, but in which there are disturbances of practically all the functions of the body. This condition is variously termed general debility, malnutrition, general atony, etc. The symptom-group is an exceedingly complex and varied one, but the most striking disturbances are those connected with the processes of metabolism; the patient is unable to replace by food the active waste occasioned by the physiologic functions. In consequence of this, nutrition suffers, vital force becomes diminished and there is functional disturbance of practically all the organs of the body. The stomach and the processes of digestion become particularly enfeebled and as a consequence there arise the symptoms of atonic dyspepsia, with lack of appetite and inability of the digestive organs to prepare the food for assimilation. The patient's vital powers are at a low ebb and nature's method of recuperation, that is, by assimilation of food, is effectually inhibited by inability of the organs to furnish the required properly prepared nourishment. Every physician has many times realized the absolute uselessness in these cases of the ordinarily employed tonics, iron, arsenic and strychnine. It is soon apparent that the remedies are either not absorbed or if they do enter the system they fail absolutely to re-establish the proper ratio of metabolic waste and repair. It is now universally conceded by authorities that the first requisite in the treatment of this class of cases, is to foster the patient's nutritive functions so that food will become assimilated and thus restore wasted tissue and impaired vital forces. The stomach is the organ of prime importance and its normal functional activity must be re-established by remedies which have a direct tonic alterative and stimulant influence upon its enfeebled, inactive mucous membrane. Stomachics—gentian, taraxacum, phosphoric acid, etc.—are the agents of most service. When, however, these stomachics are combined in a certain manner with a remedy which, according to the highest medical authorities, is the best promoter of assimilation, the indications for treatment are completely met. Gray's Glycerine Tonic Comp. combats malnutrition upon the most rational scientific basis, that is, it re-establishes normal nutritive processes by its stimulant and alterative influence upon the digestive organs and also furnishes the wherewithal—glycerine—to cause the assimilation of food and medicines. It gives nature the needed chance to resume its normal work of repairing exhausted vitality and wasted tissue. While primarily a stomachic Gray's Glycerine Tonic Comp. is of greatest value in all conditions of systematic depression or exhaustion occuring either independently or as a consequence of severe organic diseases such as tuberculosis, Bright's disease, etc. It antagonizes depression by propping the natural functions of the body, by engendering appetite and ensuring the absorption and assimilation of food—nature's method of repairing waste.—The Purdue Frederick Co., 15 Murray Street, New York.

Abstract from "The Causation and Treatment of Consumption," by John R. Kestell, Ph. C., M. D., Detroit, Mich. Read before the Wayne County Medical Society: "I have little faith in specifics in the treatment of tuberculosis. I believe it is entirely a disease of malnutrition, as a result of defective elimination, and all therapeutic measures must be directed toward the improvement of the digestion and assimilation. Consequently I am explicit in my instructions as to diet, forbidding absolutely the use of alcohol, syrups, potatoes in any form, pork, veal and all such dishes as are difficult of digestion and prone to fermentation. In many of these cases of alimentation I have found it beneficial to give some good diastasic extract of malt, that known as Maltine proving most satisfactory for the reason that it is the only malt extract known to me which gives generous proportions of nitrogenous and phosphatic matter, with a proper proportion of carbohydrates; being made, as it is, from wheat and oats, in conjunction with barley, instead of barley alone. Tonics, stimulating the nervous system and digestive organs and assisting in the reconstruction of blood and tissue, are important. Stimulating baths may be used with good results. It is, in my opinion, a mistake to overwhelm the body with frequent injections of undetermined animal serum, thereby producing either a severe reaction or possible accumulative toxemia."

I have prescribed "Maltine with Coca Wine" with great benefit as a general tonic and to counteract the prostration incident to intestinal hemorrhage from severe internal piles. No other preparation of many used has offered such relief as "Maltine with Coca Wine."

Louis W. Dunavan, M. D.,
Chicago.

Nat. Wallis, M. D., Fitchburg, Mass., writes: "I have examined Hagee's Cordial, and am perfectly satisfied with it. It is a very palatable and agreeable preparation, and is a valuable addition to our therapeutics. Hagee's Cordial Cod-liver Comp. fills 'a long-felt want' and will meet the requirements in cases where cod-liver oil is indicated, and being so admirably combined with the hypophosphites, it can not be other than a good 'tissue builder.'"

ANALYTICAL TEST.

Gentlemen:—I have used Neurosine, prepared by the Dios Chemical Co. of St. Louis, in my practice for a number of years in hundreds of cases where the Bromides are indicated, with marked success. The preparation has always been uniform and is in my opinion the best combination of Bromides on the market. On request, I have made a chemical analysis of this preparation and can state conscientiously that it is entirely free of Opium, Morphine and Chloral.

Carl Orth, Ph. C., M. D.,
Analytical Chemist.

1437 Penrose St., St. Louis.

ADMITTED TO THE FRENCH MARKETS.

It is a matter of some gratification to the manufacturers of Oakland Hydrogen Dioxide to know that their solution is admitted to the French markets.

The extravagant claims boldly set forth by some manufacturers of pharmaceutical products are frequently not found true when the contents of the packages are examined, and the French government has incorporated in its customs regulations a wise provision which prohibits from its markets all proprietary medicines which do not comply with the statements made on the accompanying label, and with the pharmacopœia requirements of the country where the goods are manufactured.

All imports are examined by expert chemists and those which fail to pass a rigid invistigation are prohibited.

The fact that Oakland Hydrogen Dioxide is admitted is equivalent to a guarantee from the French government that the article is as represented and worthy of confidence.

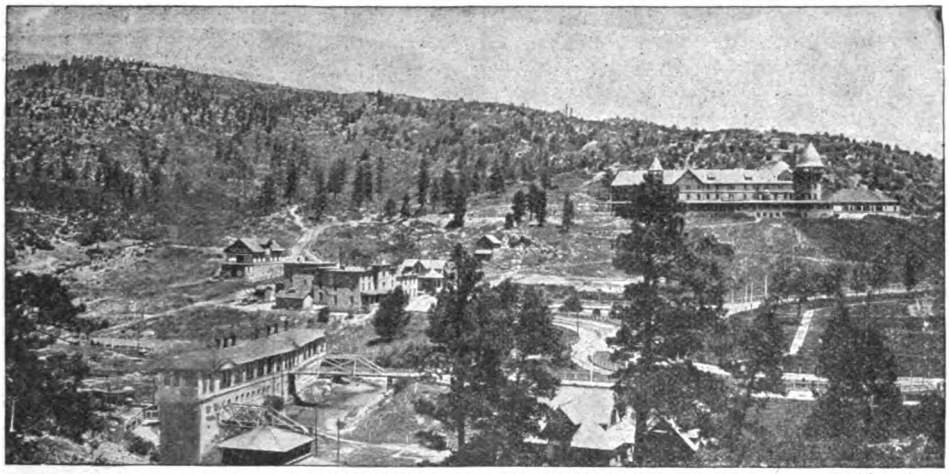
If some similar regulations existed in our own country the profession as well as the public would be protected from the assaults of unscrupulous manufacturers, and many of the conflicting clinical results so often obtained by the physician would to a great extent cease.

CLIMATE CURE.

To sufferers from the various forms of lung and throat diseases, New Mexico offers climatic conditions of especial friendliness. Here are found a very dry and aseptic air, a light atmospheric pressure, maximum of sunshine and minimum of cloud, slight variations in temperature, and a porous, dry soil. This is the land of sunshine and blue skies. It is never uncomfortably warm in summer, when one is shaded from the sun's direct rays. There are no discomforts of winter blizzards and freezing winds; and the air has a crisp freshness. The dryness is perpetual, not intermittent.

Naturally the invalid struggling with consumption, bronchitis, asthma, etc., has a better chance for recovery where external conditions are helpful, not hurtful. In many cases the chance becomes a certainty, and rugged health succeeds chronic invalidism. The paramount value of "climate cure" is attested by the experience of thousands of able physicians, and the special advantages of New Mexico are becoming better known to the medical fraternity.

The term New Mexico is a broad one, and comprehends a variety of local conditions. The northern section is higher, drier and colder than the southern; the mountain districts and table-lands differ from the valley regions, but the general characteristics are the same—plenty of sunshine and pure, dry, rarified air.



GENERAL VIEW OF LAS VEGAS HOT SPRINGS. White Photo.

New Mexico extends nearly as far south as the northern line of Florida. Its elevation above the sea ranges from 4,000 to 7,000 feet, the average being 5,600. This means a temperature equivalent to that of the New England coast, other things being equal, because every 800 feet of elevation is climatically equivalent to a degree of latitude at sea level. But other things are not equal. As stated, New Mexico is a country of sparse rainfall, and there is only a slight humidity in the atmosphere. Fogs are unknown. The result is an unusually equable climate, little affected by summer heat or winter cold.

There are few days in the year when it is unsafe for invalids to venture outdoors. In summer, the sun's rays, while ardent, are never harmful; in the shade and at night the air is always cool. When winter comes, though deep snow may cover the mountain tops, it rarely falls on the lower levels, and does not stay there long, but melts away rapidly in the genial warmth of the sun. Yet disagreeable rain and snow flurries sometimes come, though not so frequent nor so severe as in other less favored localities. Visitors should not be disturbed by them. It is impossible to live without some precipitation of moisture. Wait for the sun's long and glorious reign to begin again, and you will gladly stay indefinitely.

Pine, pinon, cedar and spruce trees grow abundantly in the mountain districts, filling the air with balsamic odors. There is no malaria; hay fever is a stranger, and epidemics of acute intestinal diseases never occur.

While New Mexico is pre-eminently a resort for consumptives, it also attracts those troubled with kidney and rheumatic diseases. Persons afflicted with inflammatory ailments and heart disease should avoid high altitudes here as elsewhere.

The term "health resorts" should not be used in a restricted sense. It properly indicates any place where one's physical condition may be bettered by baths and medical treatment, or by merely being out in the open air, engaged in hunting, fishing, riding, walking, etc. With that interpretation in mind, the passenger department of the Santa Fe Route has published a pamphlet giving the accommodations at each town in New Mexico which comes within the broad meaning of health resort. To summarize: Sanatoriums and other special facilities for invalids are only found all the year round at Las Vegas Hot Springs, Las Vegas, Santa Fé, Ojo Caliente, Las Cruces, El Paso and Hudson Hot Springs. The others are either summer pleasure resorts, like Jemez Springs, Sulphur Springs and El Porvenir, or they are cities and villages, some of which possess certain business advantages, and all of which have New Mexico's universal endowment of pure mountain air.

There are many seekers after health who must make a living while they are getting well. For their guidance a few pages of the pamphlet referred to are devoted to data concerning the avocations open to invalids, who can perform light manual labor. This information will also be of value to still another class, who, after having been restored to good health by the climate of New Mexico, must remain in that region in order to avoid a relapse, and who eventually find it necessary or desirable to engage in business.

The attention of physicians who may not have visited New Mexico is respectfully invited to the expert medical testimony which appears in the pamphlet.

Round-trip tickets at reduced rates are on sale from Chicago, St. Louis, Kansas City, Denver and other principal cities, every day in the year, to Las Vegas Hot Springs, and during the winter tourist season (November 1 to April 30), to Deming and El Paso.

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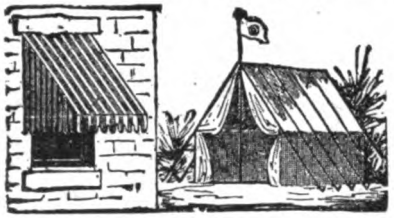

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FOR SALE.—Any physician of the mountain districts, or any other, requiring a leather saddle-bag medicine case, all complete with bottles, should write at once to THE MEDICAL DIAL. Sent direct from the factory. Case is neat and substantial, and at a moment's notice can be converted into a hand bag.

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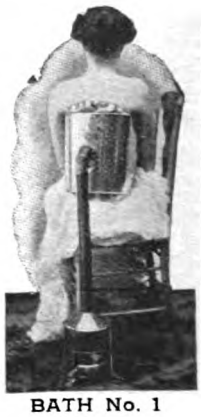

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This preparation will be found peculiarly efficacious in those derangements attended with flatulence, acid fermentation, eructation superinduced by eating rich food, pastry, starchy vegetables, excess in drinking spirituous liquors, and excessive smoking. It will prove equally valuable in almost every condition of weak and impaired or imperfect digestive powers, either due to catarrh of the mucous coat of the stomach or in those symptoms characterized by sensations of distress and uneasiness during digestion, usually termed Nervous Dyspepsia.

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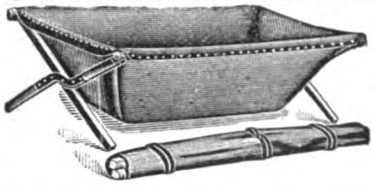

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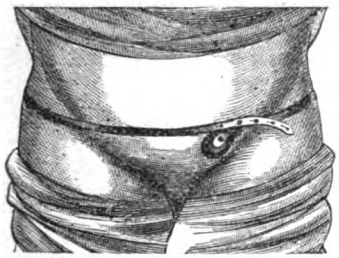

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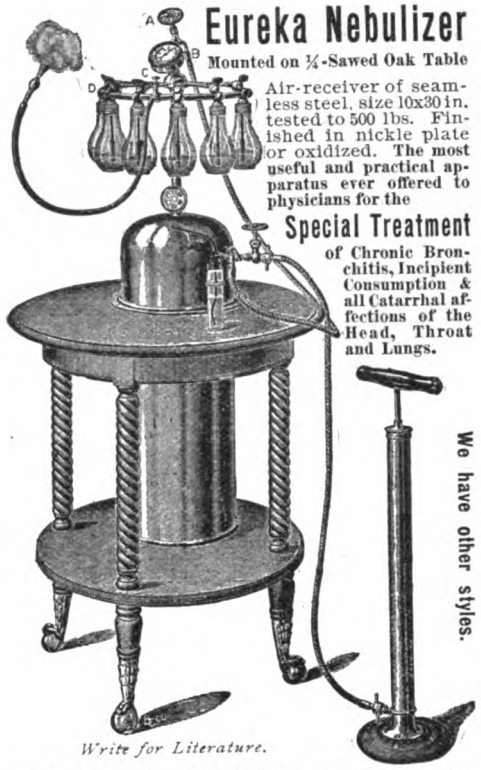

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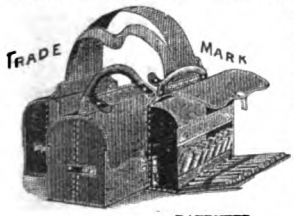

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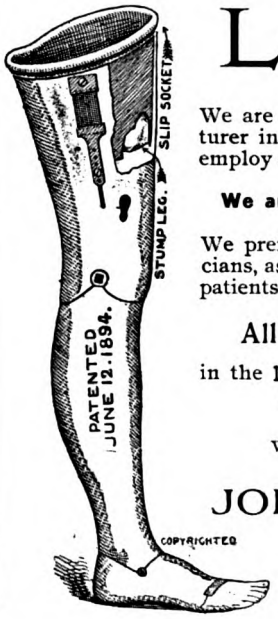

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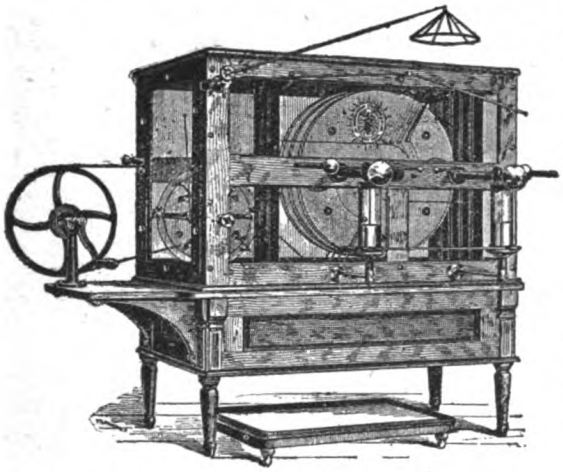

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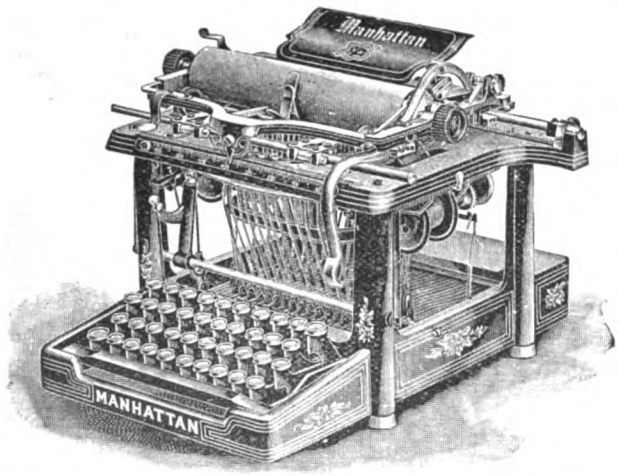

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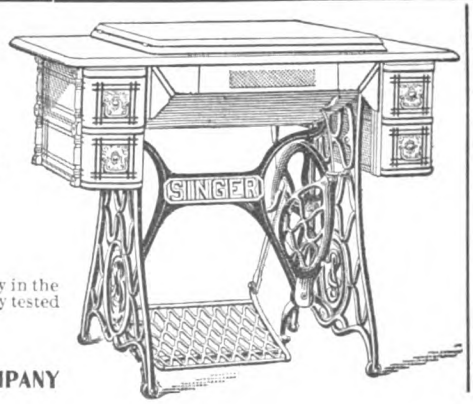

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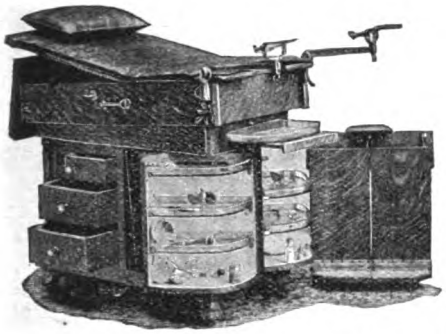

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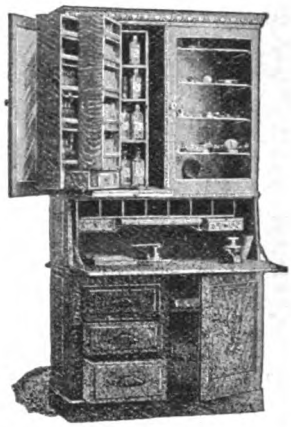

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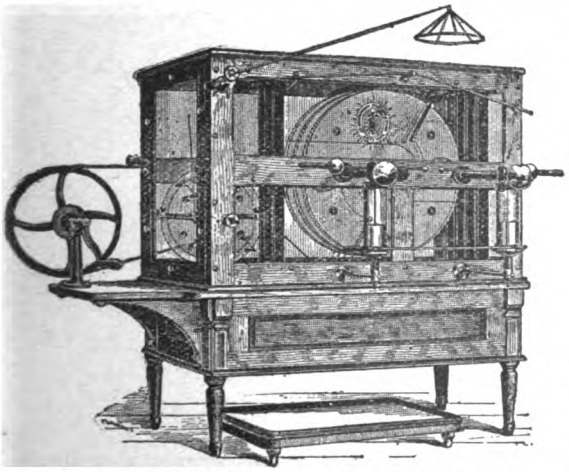

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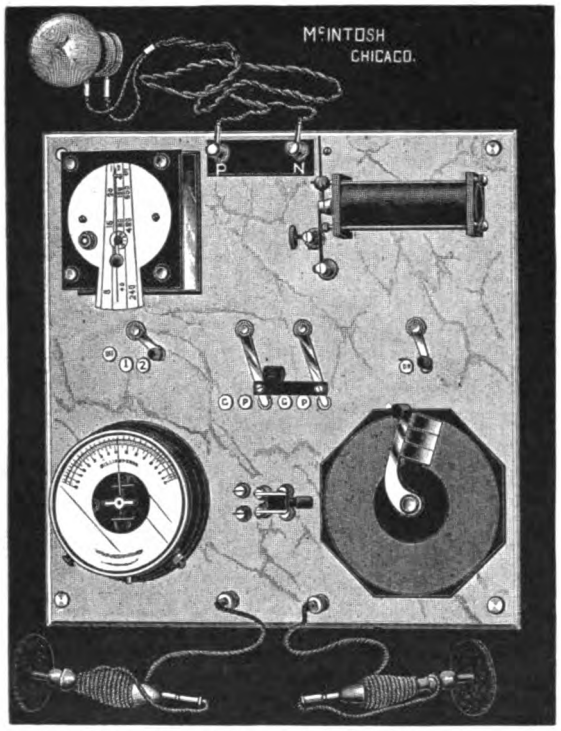

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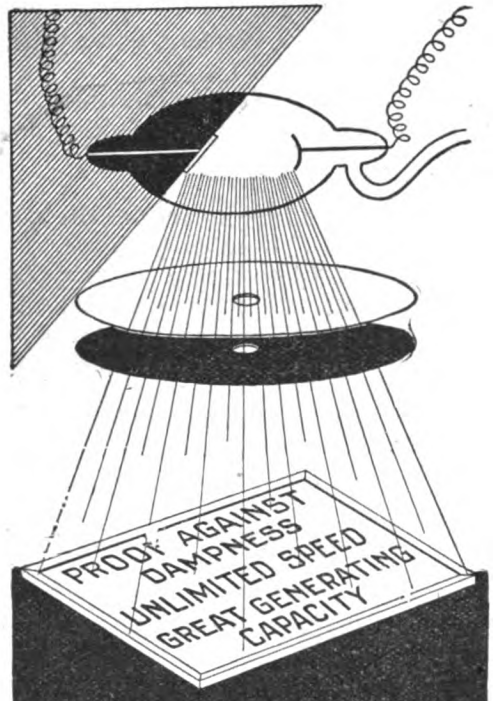

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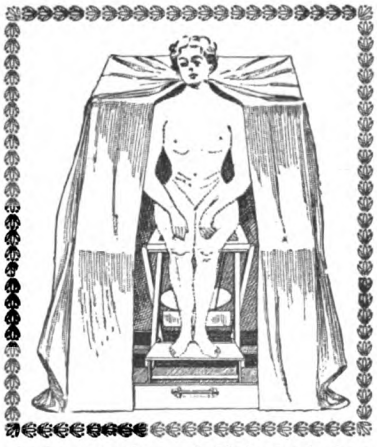

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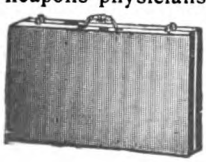

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Vol. I. MINNEAPOLIS, JULY, 1899. No. 8.

Original Articles.

DIAGNOSIS AND THERAPEUTICS OF DIPHTHERIA.

An Address Delivered Before the Hennepin County Medical Society,

By L. A. NIPPERT, M. D., Retiring President.

Ladies and Gentlemen of the Society:

"Doctors don't recognize smallpox when they see them," read the sensational headlines of a morning paper in Cincinnati some years ago. The case occurred in a ladies' school and was diagnosed as purpura hemorrhagica until the development of smallpox among the students revealed the true nature of the disease.

There are, unfortunately, today many physicians who are unable to promptly diagnose diphtheria, even though the throats of their patients show a clinically characteristic diphtheria. As the writer counts himself among their number he desires to bring this subject before the society for discussion, and hopes to benefit by the opinion of others who have had greater opportunities to observe this scourge of mankind.

An early diagnosis of any illness is desirable and necessary for rational treatment. The earliest possible recognition of diphtheria is imperative since serum treatment has been accepted as the specific which operates most successfully when used timely. At the present date the diagnosis of diphtheria is based on the presence of the K. L. bacillus, together with clinical evidence of a general infection of the system and a local affection, catarrhal or membraneous, of the mucous surfaces of the mouth, throat, nose or larynx. The existence of the latter without characteristic micro-organisms excludes diphtheria, the presence of the former without other evidence of a pathological process affecting the system cannot constitute a disease. The conditions for diagnosis being so simple why should there be difficulty in recognizing true diphtheria at once.

A. BACTERIOLOGICAL DIAGNOSIS.

1. The characteristic bacilli may not be found, as they not infrequently disappear even after a few days, or they may not have involved as yet the regions from which a smear can be taken, as in primary laryngeal cases.

2. There are other bacilli, which in appearance, manner of staining and grouping, resemble the true K. L. bacillus to such a degree that even the most experienced observers cannot distinguish one from the other, and these psuedo-diphtheria bacilli are constantly found in the throats of healthy persons. Testing their virulence is the only known method of differentiation. But does death to the guinea pig always mean virulence in the human being? I believe this is still an open question.

3. The specimen obtained may contain a large number of other bacilli or cocci, the growth of which obscure or obliterate the development of the K. L. bacillus.

4. Germicides employed may have disintegrated the bacilli beyond recognition.

Thus our bacteriological examination may give negative results and yet diphtheria exist or the bacillus found is to all appearances the true K. L. organism and yet lacks virulence. Evidently bacteriology alone should not be the only factor to be relied upon as determining the nature of the disease.

B. WHAT CAN CLINICAL EVIDENCES TEACH US?

Diphtheria prevalent or present in the neighborhood, a history of exposure, the patient a child between two and twelve years of age, taken sick with moderate fever; anorexia, vomiting, sore throat and swelling of the submaxillary glands are suspicious. Albumin in the urine, the appearance of a patch on a mu-

cous membrane, rather adherent, leaving a bleeding surface if detached, with irritating discharge from one nostril justifies the provisional diagnosis of diphtheria. The spreading of this membrane to fauces and uvula, the development of increasing laryngeal stenosis, marked prostration and progressive anemia fortifies our opinion, and yet we may be mistaken unless the occurrence of paralysis of palate or heart, or later voluntary muscle groups renders our diagnosis indisputable. None of the above mentioned symptoms except the last one are pathognomonic.

The appearance of the membrane, its manner of extension and firmness of adhesion to the adjacent structures have been considered as clinically the most characteristic signs of the disease and we will therefore consider the affections which may produce a similar appearance.

1. Membranous angina, with meshy exudation easily detached from an inflamed but not raw, bleeding surface.

2. The pultaceous deposit frequently seen in the first week of scarlet fever.

3. Herpetic tonsillitis, commencing as small vesicles which rupture, coalesce and form a yellowish covering of the tonsils.

4. Confluent aphthæ of pharynx palate and buccal surface.

5. Ulcerations of pharynx with fibrinous deposits upon them from syphilis or tuberculosis have been mistaken for diphtheria.

6. Trauma of the tonsils may result in the formation of a membrane upon the injured surface. Excepting in the last named all the constitutional symptoms, barring albuminuria, also adenitis, as in true diphtheria, may be present.

The history of trauma of syphilis and tuberculosis and in the latter two, the membrane being below the level of the surrounding swollen mucous membrane, make diagnosis not difficult. Aphthae are readily recognized if seen at first or if noticed upon the tongue. After confluence the microscope shows the characteristic spores. At the outset herpetic tonsilitis and pharyngitis show separate vesicles, at a later stage it may be impossible to distinguish them from membraneous angina.

The presence of scarlet fever generally excludes true diphtheria during the first week. A membranous deposit occurring later in the course of the disease is to be considered as diphtheritic. The question of making a diagnosis between membranous sore throat and diphtheria on the strength of the appearance of the diphtheria is best disposed of by quoting Northrup and Bovaird in Sajous' Annual, in which they state: "It is evident that it is at times perfectly impossible to distinguish the one from the other by simple inspection," nor I may add, by macroscopocial and microscopical examination of the exudate. Clinical history and observation alone are therefore not always sufficient to establish an indisputable and early diagnosis, yet, in the great majority of cases in which clinical signs show diphtheria, the K. L. bacillus is found and the diagnosis confirmed. In those cases, and they are not infrequent, in which the positive result of bacteriological examination is at variance with the clinical symptoms and appearances as in so-called catarrhal diphtheria, repeated bacteriological examinations and tests of virulence should be made before the case is pronounced and reported (I do not say treated) as diphtheria. On the contrary with negative bacteriological results and characteristic clinical symptoms the patient should be considered as suspicious until repeated examinations fail to discover the bacilli.

Few general practitioners are in position to make their own bacteriological examinations and cultures and still less animal tests. Recognizing the importance of timely diagnosis, not only in the interest of the patient, but to the community at large, most of the large cities of this country have established municipal laboratories for bacteriological work for the purpose of examining specimens sent. Our city also has a well conducted laboratory and the writer takes this opportunity to commend the promptness with which he receives his reports. In this connection it will perhaps not be amiss to call the attention of the society to, and possibly through it the consideration of the Department of Health, of some defects in the systems of collecting the smears and the manner of report of the result of the examinations made.

1. The boxes containing the smears are only obtainable at the laboratory or health office. They are not transmissible by mail, and as an express office is not always near by, nor a messenger at hand, and the physician

himself being unable to adjust his time to deliver the box at the laboratory at the proper hour, much unnecessary delay is involved. Would it not be an easy matter to have an arrangement with the proprietors of drug stores in different districts so that the boxes could be obtained and left there. The health inspector of the district can collect them at certain hours.

2. The notification from the laboratory to the physician should not be by telephone only, but also by a written note or printed blank (such as for example is used by the university) and signed by the examiner. Its value would be greatly increased by stating other bacilli or cocci found in the smear.

3. The card which the physician is required to fill out should, after name, address, etc., of patient, give the diagnosis of the attendant and be signed by him, and below his signature the bacteriological diagnosis of the laboratory given. Such an arrangement would be of great value in statistics and relieve the practitioner of taking the responsibility of the bacteriological diagnosis upon his own shoulders.

THERAPEUTICS.

A correct diagnosis to be verified by a post-mortem examination is not the ultimate purpose of the practice of the healing art. After all, the successful treatment of the patient, whose life is entrusted to his skill, is the crucial test of the physician's ability. In these days of brilliant achievements of the laboratory, with new discoveries of methods of investigation and treatment, the opening of undreamed of spheres of possibilities may lead us to greater enthusiasm, and through it to less critical readiness to accept as facts, experiments the results of which have not yet stood the test of time, and induce us to neglect the attention to the hygiene, nursing and feeding of our patient, the skillful management of which will frequently turn the tide in his favor.

The Italian saying: "Dove non va il sole va il medico" (where the sun does not go, the physician goes), expresses the popular and correct appreciation of the stimulating and disinfecting power of the sunlight.

The sick room should be bright, airy and isolated, freed from all unnecessary draperies and furniture. A temperature of 70 degrees is agreeable to patient and attendant. Steam generated by a small boiler keeping the atmosphere moist will help to decrease the discomfort caused by dryness and obstruction of the respiratory passages. At night a candle is preferable to gas or lamp light, which consumes more oxygen. Sponging the body with alcohol and rubbing afterwards, reduces fever, stimulates cutaneous circulation and allays nervous irritation. Water should be administered freely. The addition of lemon juice is agreeable and useful.

The crowding of several patients into the same room should be avoided, as it renders the air more impure and may be the cause of reinfection of the convalescents by those in which the disease is active. For cleansing of nose and throat soft cloths, which should be burned after use, are to be employed. Flushing of the air passages by gargling, spraying or syringing with normal salt solution removes shreds of membranes and stimulates the mucous surfaces. Hot water compresses add greatly in relieving the pain from swollen lymphatic glands.

Of greatest importance is the feeding of septic patients who have repugnance to food. Milk, raw, boiled or peptonized, if not well borne by the stomach, whey, meat broths, or one of my favored preparations—a cold water extract of beef with a little brandy in it—the different meat preparations and milk substitutes on the market, offer a bill of fare from which one can select according to the tastes and conditions of digestion of the sick. If food is absolutely refused gavage (introducing the tube through mouth or nose) may have to be resorted to. Persistent vomiting necessitates rectal feeding.

In few diseases a greater variety of medicines have been used, demonstrating the ineffectiveness of most of them. Innumerable specific treatments have been recommended, to be found valueless in other hands than those of their appraisers. The writer will not attempt their tedious enumeration but desires to briefly mention old standbys which have been of value in his experience. They are few. Always at the beginning, and if required during the course of the disease, I administer calomel in one-tenth grain doses until mild catharsis is induced. It stimulates the kidneys and has slightly disinfecting qualities. It is followed by small doses of bichloride of mercury given frequently for four or five days, which causes

an increased secretion of the mucous glands, thereby washing out the cryptæ and recesses of the mucous membrane and assisting to loosen existing membrane, removing bacteria and possibly resisting their growth by the germicidal qualities of the drug. As soon as extension of the membrane ceases the remedy is discontinued. About this time, the depression of the circulation, incident to the disease, will require the administration of heart stimulants. Strychnia and digitalis, with preference for the former, are given. If symptoms of actual heart weakness occur alcohol in some form is used liberally. I believe alcohol to be the most powerful antidote which we possess in cases of septicæmia and it is surprising what quantities even the teetotaller, if septic, can consume without other effect than increased strength of heart action. In the form of wine, whiskey or brandy it is certainly an agreeable medicine and easily given to children.

As anæmia begins to show, the administration of iron is indicated. The Tr. ferri chloridi seems to be the choice of the majority of physicians; my preferences are the pyrophosphate and tartrate, preparations which are less objectionable to taste, readily assimilated and are not so prone to disturb digestion. Local applications are year by year regarded as more harmful than useful in proportion to the amount of constraint necessary to apply them. If used in children who have to be held by force, they are never applied thoroughly and cause excitement and fear which act as depressants on the heart. In older children and adults a more thorough swabbing of the throat can be carried out. While as a rule the physician should be sufficiently painstaking and educated to compose his prescriptions to suit the individual case, yet there are many valuable formulæ in the market. Among these is Löffler's solution. A swab of absorbent cotton, the latter tied to a stick, is dipped into this solution, the excess removed, and the swab firmly pressed against the exudate four to six times daily. As this preparation is somewhat styptic, some patients object. In these a bichloride solution of one to five thousand should be used. After use the swab is burned. Gargles of tr. myrrh or tr. capsic., in water or a solution of potass. chlorat., are of value in keeping the unaffected parts of mucous membrane clean. Syringing with bichloride solution one to one thousand, or a solution of boracic acid, is particularly helpful in nasal complications.

Symptoms of croup are relieved by introducing steam under a tent, built over the patient. Advancing stenosis of the larynx, preventing full inflation of the lungs, as indicated by anxious look, whispered voice, feeble or absent breathing over posterior lobes of the lungs, and by retraction of the epigastrium on inspiration, demands relief by intubation. This operation, which is not a difficult one, should be the property of the general practitioner, as it may be necessary to perform it at once to save life. Although extension of the membrane into the bronchi or profound sepsis may render the case hopeless, yet the wonderful relief given by the introduction of the tube justifies its use even in extreme cases. The writer at one time intubated a child, apparently moribund, and only at the urgent request of the mother, resulting in the recovery of his patient. Among thirty-five to forty intubations he has had no untoward results from the operation except the swallowing of the tube in two cases. In each case the tube was passed three or four days afterwards.

"Gentlemen look more to nature and less to Germany," was the exclamation of an old doctor of the old school during one of his flights of oratory in a hospital lecture room in my student days. This protest against the tendency to let theory alone govern treatment was undoubtedly a timely one. Yet had he lived to see the results of antitoxin treatment in diphtheria, as witnessed by the majority of us, he would have added, "but in diphtheria assist nature by the use of the serum from Germany."

In August, 1896, the author for the first time used the serum. Until January 1, 1899, he treated sixty-eight cases, all verified by bacteriological examination or by the subsequent development of other cases in the same family. In fifty-eight patients antitoxin was injected, among these two deaths, one a child seven years old, crippled since birth (probably an insufficient dosage was used), the other a young man, sick four days and thoroughly septic before being seen, therefore not a case in which serum treatment could be used with any expectation of success. Of the ten not injected, five were adults, three were children

with a very light form of the disease, and the other two were children suffering from a severe form. In these latter two, who died, the parents objected to the remedy. In both families there have been other cases (one laryngeal) of diphtheria, and antitoxin was used with prompt recovery. It seems to be one of the disadvantages of the success of serum treatment to create the impression among the ignorant that diphtheria is not a serious disease.

Without waiting for the report from the laboratory, a patient presenting symptoms of probable diphtheria should be injected at once. It is an established fact that the earlier the serum is used the greater its effect in controlling the disease. The initial dose of severe attacks should be one thousand units for children above three years of age, for laryngeal cases two thousand units, but in younger children and lighter forms of diphtheria half the dose is sufficient. Should there be no improvement as shown by fall of temperature, decrease of pulse rate, disappearance of stupor and general better condition of the patient, with cessation of extension of the membrane within eighteen to twenty hours, a second injection should be given.

The mammary region, abdomen, thighs and subscapular are selected as sites for puncture. My preference is the latter. With the patient turned on his face he can be controlled readily, cannot see the approach of the needle and the skin is not so sensitive as on the abdomen or thigh. As a matter of course the needle and syringe should be sterile and the point of injection rendered aseptic. With the exception of cutaneous manifestations, as erythema and urticaria, ill effects from antitoxin injection are rare and the cases of sudden death reported to have resulted from its use have not been proven to have been due to the antitoxin itself. They were caused probably by the methods of administration or the action of preservatives added to the serum. If chloroform were the only anæsthetic we possess would we deprive ourselves of its benefits because of occasional mishaps? I think not.

Although the number of cases of diphtheria treated by the writer with antitoxin is but small, yet the recovery of fifty-seven cases out of fifty-eight, not selected, tonsilar, nasal and laryngeal, is a result which no other method of treatment has accomplished in his experience. As Bagnisky states it, "What I see I believe," and I have seen patients suffering from severe attacks of diphtheria recover so promptly after the use of antitoxin that I would have doubted the correctness of my diagnosis had it not been for the confirmation from the laboratory. And this experience is the same the world over and is recorded by men of almost unlimited opportunities of observation, men known for their cautiousness, conservatism and judgment. I am therefore convinced that in antitoxin we have a true specific for diphtheria. Let us hope that the persevering researches and experiments to which hundreds, yes thousands of earnest workers devote their lives, will result in the development of other specifics which will dull the sting of death in many a disease.

HOUR OF BIRTH AND OF DEATH.

From an analysis of 36,515 births and 25,474 deaths, in which the time of day was accurately noted, Dr. Rasovi (Klinischtherap. Wochenschrift, No. 43, 1898) concludes that the maximum number of deaths occurs during the afternoon hours (between two and seven o'clock), and the minimum in the hours before midnight. The time of the maximum number of deaths corresponds to the hours during which, in the healthy person, the pulse frequency and the body temperature are at their height. He attributes the fact that the maximum number of births takes place in the early morning hours to two causes: (1) During these hours the accumulation of CO_2 in the body reaches its height, because oxidation takes place slowly, and under the influence of bed-rest and warmth the CO_2 is slowly eliminated; and as a result of the diminished blood pressure at this time there is an accumulation of CO_2 in the uterine venous plexus. (2) The inhibitory action of the cerebral and spinal centers on the sympathetic system is less marked at night, so that the impulses of the latter are expended with greater effect. The inhibitory power of the central nervous system is at its height during the early afternoon hours, or at the time when births are least frequent. The writer also claims that the early morning frequency of asthmatic and epileptic attacks may be ascribed to the diminished inhibitory action upon the sympathetic system at this time.

The state of Texas is soon to have an epileptic asylum at Abilene, the last legislature having passed a bill to that effect. The same legislature also ordered an appropriation to greatly increase the capacity of the insane asylum.

THE PHYSICIAN FROM THE PATIENT'S STANDPOINT.

An Address Delivered at the Graduating Exercises of the Medical Department of Hamline University, June 5, 1899,

By WILLIAM E. THOMPSON, A. M.,

Professor of Latin Language and Literature.

The medical students who are soon to receive their diplomas have doubtless heard all the technical advice during their four years' course which they care to absorb. They have submitted to quiz after quiz from the various members of the medical faculty until they are Christian Scientists to the extent they are willing to try absent treatment for a while at least. It will probably take the next twenty years for you to assimilate what you have not rejected and forgotten. So you will not be bored tonight by me with anything from a professional standpoint. Perhaps, however, you might be willing to submit to a snap shot or two of your learned and much instructed selves from the point of view of a prospective patient.

No one knows better than yourselves that the day of short and superficial preparation has gone, and that a man who practices the healing art now must take something a good deal stiffer than two six months' courses in lecture-room and laboratory and a short time in a practicing physician's office. The man who is hunting for a snap is woefully mistaken, if he expects to find it in the courses of a reputable medical college of any old and well-established school. Your alma mater and its sister across the river have foot by foot raised the bars until the requirements are now such that the advocates of short and easy methods are beginning to talk about a medical trust. They feel like the boy who was told by his father that mother and he had decided that their young hopeful needed a local application of birch-bark, a posteriori, to correct a very evident derangement of the young man's moral liver. The precocious degenerate, fully inoculated with the virus of the anti-trust environment of the present hour, bitterly exclaimed, "Yes, you and maw always agrees when it comes to licking me. You and maw's the whole thing. I don't never have no show. This family's run by a trust." Whereupon the head of the trust began to monopolize the anxious attention of the impertinent youth to the tune of several resounding whacks.

Now, from the standpoint of the patient, whatever his opinion about other combinations, the medical trust (so-called) in Minnesota is doing an eminently proper thing in raising the standard of qualifications demanded of those aspiring to the vocation of a physician, both when they enter and when they are graduated.

The health of the patient is his capital and his life. Therefore any addition to the thoroughness of a young doctor's preparation is a guarantee that he will be better fitted to care for the physical and mental welfare of the public for whose sanitary soundness he has become responsible.

Young men who have dedicated their lives to the healing art are appreciating this fact and flocking to those schools where the standard is high. They are actuated by at least two motives. They feel as the colored boy did who joined a mission school in the South, the need of adaptation to environment. As he very aptly and picturesquely put it, his reason for wanting a thorough education was, "Dis chile is dorgoned tired of wearing a two-dollar hat on a ten-cent head." Now the courses that the medical college of Hamline University has laid down are not adapted to heads contented to remain ten-cent heads, and the medical profession is the last one for ten-cent headed men to enter.

But another reason for the young medic's longing for a sound and complete medical training is the very laudable ambition which he entertains of reaching a high place in his profession. He knows that the room at the top is more and more to be occupied by thoroughly equipped students of the medical art. He does not expect to reach the dizzy altitude of that eminent specialist satirized in a late number of the Chicago Tribune. He had performed an operation for appendicitis. A medical student asked him if the operation was successful and received this reply: "No! We did not find any vermiform appendix and the patient recovered." The ambitious young doctor would like to see his name in later years among such immortals as Jenner, Harvey, Morton, and Lister.

You want to realize, young doctors, that no one can be more intensely interested in your solemn and learned selves than the patient whose acquaintance you are so impatient to make. He is not waiting as impatiently for you as you are for him. But he demands certain qualifications from the physician whom he is going to employ. Now, your patient is not always so unreasonable as you have been led sometimes to believe. He does not expect you to know it all at the start, and there is one kind of a young doctor that the patient has no earthly use for whatever i. e.—the one who knows it all de novo. If any neophyte at the shrine of Galen and Hippocrates starts in with too much of the "I am Sir Oracle" smirk upon his visage, he will soon be without a case.

This remark leads me to the first qualification which the patient asks from his physician: viz. modesty. I do not mean by modesty awkward bashfulness or "Uriah Heep" humility. I mean simply that unassuming confidence in one's ability which goes quietly along with its work without sounding a trumpet at every street corner or covering with advertisements the fences from Minneapolis to St. Paul. "Good wine needs no bush." The genuinely competent physician is sooner or later found out and in demand. Modest worth may not always find recognition; but in the long run patients would rather trust themselves and their friends to the care of the man whose pretentions are not too extravagant than rely upon the much-vaunted skill of some Bombastes Furioso tramping about the country and making wonderful cures.

The second quality which the patient expects to find in his doctor is gentleness. This is closely connected with the first quality of modesty. I know that there have been many successful physicians, so far as professional emolument and fame are concerned, who have seemed and often been really rough and boorish. But their success was due not to this quality, but in spite of it; because they had other redeeming traits. There were a good many surgeons in the Civil War who had this reputation. When they came back to their home practice this trait seemed to stick by them; but how often have we heard patients say, "If Dr. X. were as gentle as he is skilful I should want him every time that I employed a physician, and not in extreme cases only." The doctor needs to have the same qualities which he insists upon in his nurses. If there is any quality which a patient appreciates more highly than any other in nurse or doctor it is tenderness. Of course this quality can be found only in a man of a naturally sympathetic heart. True tenderness and sympathy are never inconsistent with genuine manliness. "Brave as a lion and tender as a woman" has passed into a proverb with us. Sir Philip Sidney was no fitter, no nobler incarnation of those qualities than William McClure or many an unknown country or city doctor.

Tact is another qualification which the patient requires. If any one needs to be all things to all men in the true sense of the term it is the physician. He comes in daily contact with all classes, ages, conditions, and trades. He must know the best methods of approach to a thousand different persons often in a single year, even where he may not have professionally treated a hundred. Happy is the man who is born with a good deal of it. He needs to have his medicine-case full of it; but even a moderate amount may be vastly increased by cultivation. No man has more occasions on which he has to employ it, unless it be the teacher and the preacher. How often we hear it said of some bumptious young or even old doctor, "What a pity so bright a fellow did not have a little more of the savoir faire, the art of approaching people."

Of course tact, a proper self-repression, and discretion are three branches of that quality which has its trunk and roots in what we designate by the homely Yankee phrase level-headedness. If ever a man needs to have equipoise of all his powers, it is the physician; for in his hands often are the issues of life and death. An instant of self-demoralization or forgetfulness may cost him his professional reputation, and bring needless sorrow to a wide circle of his own and the patient's friends.

The patient asks also from his medical adviser cheerfulness and hopefulness. Of course the young medic just beginning practice has many natural anxieties and perplexities to harass him. All of these for his own sake, as well as that of his patient, he must relegate to the rear, when he enters the sick-room. Like the pious Aeneas he must press his cares deep down in his breast and feign hope with his countenance. A merry laugh or a cheerful

smile often does more good than all the drugs of the pharmacopœia. To have a genially radiant face one must have a sweet and sunny disposition. Serenity of soul gives this and serenity of soul can be cultivated as well as any other virtue by a steadfast looking on the bright side of things. The doctor often preaches that doctrine to his patient. Let him take stiff doses of his own medicine of that kind, well-shaken, as often at least as every hour. That kind of treatment will often do as much good to a care-worn doctor as to the sick patient. It ought to do more sometimes. Ah! What a light seems to shine through the hospital as the sunny-souled and bright-faced doctor goes through his ward with a cheery word for each sick one, and how the patients feel toward him as the soldiers in the Crimean hospitals did about Florence Nightingale's shadow, as though they would kiss it as she passed that way.

Another quality which the normal patient asks for in his physician is sincerity. This is not inconsistent with what has been said before about tact and cheerfulness. I do not mean by this that the patient expects to be told all that the physician thinks about his particular case or that of any other person. But he does want to feel that he can trust his medical adviser as a genuine man in whose hands his case will receive fair and honest attention. He believes in a man who has strong convictions as to the merits of the particular school of medicine whose principles he has espoused and who will not change his treatment to suit the momentary caprice of a sick man. The normal patient hates nothing worse than shams and mongrels, and when he has made up his mind as to the merits of a particular school he expects that the man who is treating him according to the principles of that school is true to his medical belief. The patient who is seeking for such a man sticks to him when he finds him. The true doctor must therefore be a true man in the broadest sense of the term, true to his patient, true to his principles, true to society, true to his own family, true to himself.

The reasonable patient also asks of his doctor that he be a progressive man. We hear a good deal now about being strictly up-to-date. That does not mean that one should be everlastingly agog for the latest fad or freak. It means simply that one should be conservatively progressive. He has to keep in touch through his medical journals with the latest well-authenticated discoveries and remedies in his chosen field. He has to be well-read also in matters of general interest and importance. He has all the time, while adding to his medical knowledge and experience, to say to himself and act as though he thoroughly believed it:

"Be not the first by whom the new is tried,
Nor yet the last to lay the old aside."

But if we should say nothing more than what the patient expects from his doctor, you might well think that this seems like all give and no take as far as the physician is concerned. It is all right for doctors to give medicines and advice, but when it comes to making all the concessions without any return, why, that is a different thing. Well! the doctor has his reasonable requirements and expectations. We have talked of doctor debtor to patients. Now let us look at the other side of the account and think about patient debtor to doctor. What concessions to his doctor does a sensible patient gladly make?

First, he feels that he ought to place the fullest confidence in the professional integrity and manliness of the one whom he has called to treat and advise his family and himself. He cannot expect medical skill, advice, or remedies to do himself or his friends much good, unless he places implicit confidence in the man who is for the time the guardian of his health and his physical and mental savior. There is no tie outside of the family relation more tender and sacred than that which is often formed connecting the patient with "Luke, the beloved physician." We see it more frequently, it may be, in the country than in the city, more often in the older than in the newly settled portions of our land. The practitioner of long experience becomes the friend and the confidant of those whom he has watched from the cradle to manhood and womanhood and sometimes to the grave. Frequently three generations of the same family employ him, first from necessity, and then from choice, as their counsellor and friend. He carries the whole countryside on his heart, and deserves and often receives undying gratitude, respect, and love.

Now, into this honorable and beloved fra-

ternity you are to enter, and it is your privilege to expect eventually to win your way to deserved confidence and esteem. You, of course, expect to hear all sorts of witticisms uttered at your expense; but you know that those who are most fond of associating you with undertakers and cemeteries instead of with Hygeia, the goddess of health, are the first to send for you, if they think that grim death is knocking at their portals, and then the rattle of your wheels or the sound of your voice is more welcome music than the rustle of angels' pinions to waft them away from this world which they feel so reluctant to leave.

But the confidence which the patient gives to his physician is not deserving of the name, unless it results in obedience. So this is the inalienable and undeniable right of the practitioner whose services have been engaged.

He is the autocrat of the sick-room, and patient, nurses, and friends are in duty bound to carry out his instructions. The life of the patient is in his hands, and disobedience to plainly written or uttered instructions is unfair, culpable, and sometimes even criminal. If the patient comes to the point where he will not or cannot follow directions, when he is in his right mind, then every right-minded and honorable doctor feels under no obligation to keep the case, and intimates that his services are no longer at the command of those who do not know the very first principles which should govern a sick man and his friends.

But confidence and obedience are not the only debts which the patient owes his doctor. Appreciation of services, sometimes inestimable, goes a good deal farther than this. Fault enough is often found with even the best physicians, if things do not seem to go exactly right. He needs all the more genuine and warm commendation when he has handled a difficult case skillfully and well. The patient too often takes too much for granted, and little thinks of the hours of watchfulness, anxiety, and care which the faithful doctor has spent upon his case. The considerate patient must take all these things into the account and show his high appreciation not only to the man who has saved him, but to all his friends and acquaintances by his loving advertisement and cordial commendation of the one who has been his great deliverer. How can he ever do too much for this man who has done so much for him?

But confidence, obedience, and praise are not the only things that the patient owes his doctor. "Fine words butter no parsnips." The physician cannot live even on such excellent things as trust, obedience, and commendation. There is no man living who trusts men longer or who has greater patience and consideration than the kind-hearted doctor.

If you could see the account books of some practitioners not a hundred miles from these two cities, and compare the services rendered with the compensation received, it would be an eye-opener to many who are always talking about the extortionate charges of professional men. The gratuitous work done by doctors for which they never think of charging is simply enormous. The poor and the unfortunate are again and again treated by them without the hope or the claim of any remuneration. They know the poor and the proud in their community, and in numberless delicate ways alleviate their miseries without ever charging a cent, and are as careful and skilful as though they were to receive a hundred or five hundred dollar fee. They are the good Samaritans of their community. Their voluntary unpaid benefactions of time and skill are large, their expenses, professional, family, and social so great that the intelligent patient readily sees that sentiment alone will not support a physician and keep him from bankruptcy. So he cheerfully receives the monthly statement of services rendered and promptly sends his check to the man who is, alas! too often the last one thought of in settling accounts. If all that a man has will he give for his life, why should he not gladly and liberally reward the man who so often saves, prolongs, and renders more endurable that life?

So let the patient remember that while he often claims from his physician modesty, gentleness, tact, discretion, self-repression, cheerfulness, hopefulness, sincerity, full professional equipment, in short every virtue under heaven, he in turn owes the debt at least of confidence, obedience, high appreciation, and liberal compensation.

May you, graduates of the class of 1899, find patients who are willing to cordially concede your just claims, and may they find in you men who possess the qualifications which they

ask of their chosen doctors. Then you will have at least a partial recompense for the years of hard and honorable service to which your friends devoutly wish you may all attain.

*EXTRA-UTERINE PREGNANCY.

By LESTER W. DAY, M. D., Minneapolis, Minn.

In looking for a subject for my paper this evening it occurred to me that a semi-historical account of the development of our views concerning extra-uterine pregnancy taken in connection with microscopic specimens would be of interest. My chief source of information are the lectures of Dr. J. Whitridge Williams, associate professor of obstetrics at the Johns Hopkins University. I purposely touch lightly upon symptoms, diagnosis and treatment. Extra-uterine pregnancy was first described by Albucasis, an Arabian physician living in Spain during the eleventh century.

Three hundred years later the wife of Jacob Nufer, a pig-stone cutter, came to child-bed, and, after suffering many hours, and having exhausted the arts of the barber surgeons and midwives, was given up to die. Nufer, who had been away from home, returned to find his wife in desperate straits, and with the courage of despair opened her abdomen, delivered his child, and saved the life of his wife. Caspar Baukin wrote an acount of this, thus giving us the first operated case reported.

In 1604 Riolanus wrote the first description of tubal pregnancy, and ten years later Mercerus gives us the first description of interstitial pregnancy.

From then on to 1741 numerous individual cases were reported, when Bianchi collected them into one book.

Josephi in 1803 attempted to classify the various forms of extra-uterine pregnancy; but the first clear conception was given us by Tait, in 1888.

The ancients, because of their false notions concerning pregnancy, could not conceive how ectopic pregnancy could occur. Uutil the middle of the seventeenth century it was believed that the ovaries corresponded to the testicles, and that they secreted the female semen. To three Hollanders, Van Horne, de Graaf and Schwammerdam, do we owe a refutation of this idea.

*Read before the Hennepin County Medical Society.

De Graaf in 1672 said that ova existed in the female testicles before coitus; but what he described as ova were really follicles. He knew that the follicles ruptured; but it was not until just before he died that he discovered an ovum.

De Barr was the first to discover an ovum. Following his discovery came the idea that only under the influence of sexual intercourse would an ovum mature. They considered a corpus luteum to be a sign of pregnancy, and upon the strength of this belief Denman Cooper gave evidence before an English court which resulted in the hanging of a man on trial for criminal assault. After rupture of a follicle the ovum normally passes down the tube; but how? In some animals a capsule surrounds the ovary and connects it with the tube, thus removing any possibility of escape for the ova into the abdominal cavity. In man there is a space, filled with fluid between the ovary and the fimbriated end of the tube.

"Rouget" advanced the theory that the fimbria become erectile and grasp the ovary at the place of rupture, thus endowing the tube with reason. Kehrer of Heidelberg supposed that the follicle ruptured with such force that the ovum was injected into the Fallopian tube.

The theory taught by Dr. Williams is that the cilia in the tubes produce a gentle current in the peritonitic fluid which draws any foreign particles in the vicinity of the tubes into them.

Pinner has shown that if cinnabar be injected into the abdominal cavity a portion will find its way into the tubes and thence into the uterus.

Lode used the eggs of the tapeworm in a similar way, and with similar results.

In what other way can we explain external migration?

It is generally stated that it takes about eight days for an ovum to make the trip from the ovary to the uterus; but the work of proving this was done upon animals. Hyrtl found, however, an ovum in a girl's tube five days after menstruation.

In 1785 Spallanzani proved that semen was the agent of fertilization before which time it was thought to be due to the aura seminales.

How the spermatozoa get into the uterus is not definitely known. Sims supposed that the semen is collected into the posterior fornix and is thence sucked up into the cavity of the uterus.

Kristeller believed that during the orgasm a plug of mucous is pushed down into the lake of semen and was later withdrawn with the adherent spermatozoa.

Henle showed that spermatozoa move an inch and one-half in an hour, and so possibly they climb up (?).

Tait in 1883 accepted the then common belief that the cilia in the uterus and in the tubes move in opposite directions; those in the tubes being directed downward toward the uterus while the waves in the uterus move upward toward the fundus. The purpose of this contrary action he believed to be to direct the spermatozoa toward the ovum descending in the tubes, creating at their point of meeting a quiet spot where the ovum may implant itself.

Hofmeyer proved that this was only a theoretical belief, and that normally the direction of the cilia wave, in both tubes and uterus, is toward the cervix.

Tait further believed that the downward action of the cilia in the tubes prevented the entrance of spermatozoa into the tubes and that whenever they do gain access it is because of the destruction of the cilia by some inflammatory process.

A. Martin proved the fallacy of this idea. Spermatozoa may always be found in the lateral portion of the tubes of women constantly exposed to coitus.

Dührssen found living spermatozoa three and one-half weeks after the last coitus in the tubes of a girl; while Bischof found large numbers of spermatozoa upon the surface of the ovaries and in the tubes of animals killed shortly after coitus. Thus it seems reasonable to suppose that impregnation occurs normally in the tubes, and if for any cause the downward passage of fertilized ovum be obstructed extra-uterine pregnancy occurs.

Such causes may be classified under three heads:

1. Obstacles within the lumen of the tube, by which its caliber is diminished or entirely obliterated.

2. Diseases of the tubal walls and peculiarities in its anatomy or form.

3. Factors acting externally to the tube, by which its lumen is encroached upon or obliterated.

The occurrence of tubal polypi, first described by Ahlfeld and Leopold, was the explanation that appealed most strongly to the early investigators, but the comparatively few cases reported in recent years leads us to believe it an infrequent cause.

Dr. Williams had an opportunity to describe the following case of tubal obstruction: The left uterine tube was the seat of two extra-uterine pregnancies. At its uterine end was a small sack containing the skeleton and calcified remains of a fœtus which completely occluded that portion of the tube, and from the satisfactory history obtained clearly represented the remains of an extra-uterine pregnancy which had occurred twelve years previously. The lateral end of the tube contained the placenta and the membranes of a four months' pregnancy which had ruptured, allowing the escape of the fœtus into the abdominal cavity, where it was found alive at the operation. The left ovary was small and atrophic and presented absolutely no sign of a recent corpus luteum. The right tube presented signs of peri-salpingitis and endo-salpingitis; but its fimbriated extremity was patent, and the right ovary contained a corpus luteum corresponding in size to the duration of the pregnancy.

Dr. Williams has been able to demonstrate external migration of the ovum in five out of thirty cases of which he has accurate pathological records. In all of them the fimbriated extremity of one tube was completely occluded by old inflammatory processes, or the tube was converted into a hydrosalpinx, while the other tube was the seat of the pregnancy, and presented a patent fimbriated extremity. In each case the ovary on the pregnant side presented absolutely no evidence of a corpus luteum, while the ovary corresponding to the occluded tube contained a typical corpus luteum of pregnancy.

In 1891 Dr. Williams found by cutting serial sections of the tubes that beginning at the horn of the uterus there are only from two to four simple folds of mucous membrane. Gradually as he passed away from the uterus he found these folds to become more and more involuted and complex until at the ampulla every trace of the original simple structure is lost. Furthermore he occasionally found that where the infolding occurred near the base of one of the original folds that instead of stopping at the muscular coat the invagination would penetrate it and then run parallel to the lumen in the wall of the tube, ending in a blind cul-de-sac.

Theoretically nothing could be simpler than for a fertilized ovum to be swept into one of these cul-de-sacs and there develop. Williams was able to demonstrate this mode of development in 16 per cent of his cases of extra-uterine pregnancy. Here owing to the thinness of the wall, the tube generally ruptures at a very early stage. Peritonic bands may produce an obstruction sufficient to prevent the downward passage of an ovum while permitting the tiny, wriggling spermatozoa to pass upward.

W. A. Freund has pointed out that abnormal bending of a tube, as where the fœtal type of tube persists, produces constriction of the lumen. A number of authors believe the tubes to be normally endowed with peristaltic action, and that this movement is an important factor in the downward propulsion of the ovum. There are two factors that may interfere with this movement,—thickening of the tubal walls, due to salpingitis, and adhesions about the tube. It is to these causes that Dr. Williams attributes the large number of cases of extra-uterine pregnancy that occur in association with inflammatory affections of the tubes, and not to destruction of the cilia, as Tait believed. Catarrhal salpingitis never causes destruction of the cilia, and even in extreme grades of pyosalpinx one may demonstrate them. In all of Williams' cases cilia were found, although a purulent salpingitis was present in three, and in another case a follicular salpingitis.

Leopold reports a case where a myoma of the uterus so compresed a tube as to prevent the passing out of an ovum.

Kelly gives the following classification of extra-uterine pregnancy based upon the original point of implantation of the fertilized ovum. When it remains and develops where first arrested it is called primary extra-uterine pregnancy; upon changing its position by rupture or further development, it is designated as secondary.

Of the primary forms we may have interstitial, isthmial, ampullar and infundibular; the latter becoming secondarily tubo-ovarian or tubo-abdominal.

I will not attempt to discuss these varieties. The tube walls increase in size owing to the hypertrophy of the muscle cells, the development of a decidua vera, and to the great increase and hypertrophy of blood vessels.

We are not able to distinguish as clearly between decidua vera, serotina and reflexa, as in ordinary pregnancy. The decidual cells come from the connective tissue cells of the mucosa being due to a hypertrophy of the existing cells rather than to a new growth. Also we find a certain number of the decidual cells to be derived from the endothelium and perivascular connective tissue of the blood vessels.

In a number of cases the entire mucosa of the tube is converted into decidua, and in one case Williams found not only the mucosa of the pregnant tube but that of the other also converted into decidua vera. In all these cases we find changes in the uterus. For the first three months it grows as rapidly as though it contained an ovum, also developing a decidua vera. After three months it ceases to grow. In rare cases this change in the uterus does not occur. As to the changes in the lumen of the tube no general remarks can be made as they vary in almost every case.

Werth, of Kiel, pointed out that if serial sections of the tube be cut, we find that as we approach the sack the lumen becomes smaller and smaller until it is at last obliterated. Still in a number of cases the lumen of the tube is continuous with the sack of gestation. Again as we approach the sack the epithelial structure gets smaller and smaller, and we have finally only a few epithelial slits corresponding to the high ciliated epithelium. (Specimens.)

As to the outcome of tubal pregnancy, in a rare number of cases gestation goes on to the full term in the tube. Williams has seen two cases. In the vast majority, however, rupture occurs about the twelfth week; though it may occur at any time. Tait taught that rupture usually occurred into the broad ligament, the outcome being encapsulation of blood and hæmatoma in the broad ligament. Williams has only seen one case that conforms to Tait's law. When rupture occurs into the peritoneal cavity the woman may die of hemorrhage; if she does not die, the blood is either absorbed or a hæmatocele is formed in Douglass' sack. The ovum may be expelled with membranes and placenta, or the placenta may remain in the tube. If the first occurs, and the mother lives, the probabilities are that the ovum will be absorbed. If the fœtus escapes alone the conditions are more favorable for the child, and it may go on to full term. The placenta,

on the other hand, may become attached to other organs and the circulation be established.

If the tube does not rupture the rule is that the pregnancy goes on for a few months only, and then the fœtus dies and is gradually converted into a blood mole. Again, infection may occur leading to pyo-salpinx (rare). The fluid may be simply absorbed and the fœtus mummifies; calcification may occur, and we have a lithopædion formed, or, lastly, it may be converted into a fatty mass bearing a relation to the ammonial soaps.

Symptoms of Ectopic Gestation: Sometimes the symptoms are the same as in normal gestation, and the woman is not aware that anything is wrong. But more frequently a tumor appears to one side of the medium line, elastic and painful to touch, which grows from month to month, while the uterus itself enlarges to the size of a two or three months' pregnancy. This may be associated with attacks of paroxysmal pain in the lower abdomen. The fœtus may continue to develop in spite of several of these attacks. With the death of the fœtus the decidua of the uterus is cast off, and the woman believes that she has had an abortion. If the pregnancy goes on to full term without rupture, the patient suffers pains similar to the pains of miscarriage or of true labor, and are called false labor pains. That contraction of both uterus and gestation sack occurs, has been postively proven. The pains may last several days and gradually die out. The child dies; the fluid is absorbed and the child may remain in the abdomen for a long time without causing trouble.

More commonly the tube ruptures and with this accident there is sudden intense pain in the lower abdomen. The patient becomes very anæmic and faint, and complains of hunger and thirst.

The first accurate diagnosis before rupture was made by Johann Veit of Berlin in 1885. If we find a woman with the subjective signs of pregnancy and a soft mass on one side of the uterus, we are justified in making the diagnosis of extra-uterine pregnancy. As the tumor grows the diagnosis becomes more positive. In a number of cases ordinary pregnancy may simulate extra-uterine pregnancy owing to displacement of the uterus. Upon putting the uterus in position the symptoms disappear. When the fœtus dies the diagnosis is often very difficult. If we find an abdominal tumor and are unable to feel the outlines of the child it may be impossible to make the diagnosis. If death occurs after spurious labor pains and the tumor decreases in size the cause is quite evident.

Some workers believe that it is justifiable to curett the uterus and remove enough of the membrane to examine under the microscope. Dr. Abbott has recently pointed out that curetting should only be done when the surroundings are such that an operation for removing the sack can be immediately done.

Up to three or four years ago the treatment of these cases was a mooted question. At present operative treatment is the only thing advocated, Lawson Tait being the father of this movement. One of the earliest methods was to puncture the sack, draining off the fluid. Dangerous injection of morphia and other drugs into the sack have been tried in hope of killing the fœtus. It has even been seriously suggested that the mother be syphilized. Electricity was next advised, and in this country has had many adherents. At present it is employed by very few.

The condition must be regarded as a very dangerous one or even as a malignant disease, as the entire tubal wall may be eaten out by the growth of the placenta. If the diagnosis is reasonably certain we should advise immediate operation; if on the other hand we are called in after rupture, we must try and increase her strength. If her condition will permit she should be operated immediately.

If we come to a case that has gone on to full term, it is considered best to operate at once and not consider the life of the child, as it is usually poorly developed. In some cases it is practicable to remove the entire product of pregnancy; but in others to remove the placenta would be followed by uncontrollable hemorrhage. In these cases we should leave the placenta within the abdominal cavity to take care of itself.

When the physicians of Florida shall have induced the legislature of that state to prohibit the awful crime of kissing and that disgusting habit of expectorating in public places it is presumed that the tuberculosis bacilli will have to seek more salubrious climes for their unpleasant habitation, and not until then will the people of that flower-scented state rest at ease.

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JULY, 1899.

THE SURGICAL ANATOMY OF THE GALL DUCTS.

The surgical literature of the gall bladder and ducts has recently been enriched by several valuable papers. In our issue for May we published a paper by Dr. Knut Hoegh which deals in a very practical manner with the present status of the etiology, diagnosis and treatment of gall-stones.

The gross anatomy of the gall ducts has been so well established by the work of so many able observers that little that is new can be expected in this diection. However, as the surgery of the cholopoictic system has advanced, the anatomy of these structures is studied with new interest, and several modifications of our views must be admitted.

Dr. George Emerson Brewer, of New York, gives a preliminary report in the Annals of Surgery for June, on "the Surgical Anatomy of the Gall Bladder and Ducts," from an analysis of one hundred dissections. In nine cases the gall bladder was adherent to neighboring viscera so as to change the normal relations. In seven of these, the gall bladder was found to be adherent to the first and second portions of the duodenum, and the traverse colon and the omentum, rendering access to the ducts aud duodenum, for purposes of exploration or operation difficult, and only possible after considerable dissection. The average length of the gall bladder in the 100 cases was four and three-fourths inches, the smallest was one and one-half inches in length, while the largest measured six inches. Twelve of the 100 gall bladders contained calculi, the number varying from one to 250. The length of the cystic duct varied from one-half to two and one-half inches. "In one instance it was one-half inch in length, in three instances it was three-fourths, in fifty it was one, in twenty-one instances it was one and one-fourth inches, in seventeen instances it was one and one-half inches, in three instances it was one and three-fourths, in four instances it was two, in one instance it was two and one-half, the average of the 100 cases being two and one-third inches." The last figure in the foregoing quotation is evidently an error, as according to the figures the average of the measurements in the 100 cases is one and one-fifth inches. The length of the common duct varied from one and one-half inches to four and three-fourths, the average being three inches.

The practicability of passing a probe through the ducts was studied experimentally by Dr. Brewer. "The cystic duct, owing to the spiral valve formed by the mucous membrane, rarely permits the passage of a probe, while in the hepatic and common ducts, which possess no such valvular arrangement, probes even of large size pass in either direction with the greatest freedom."

"To test the frequency and ascertain if possible, the conditions under which the cystic duct becomes so altered as to freely admit the passage of a probe, an attempt was made in ninety-seven subjects to pass a soft metal probe from the gall bladder through the cystic duct into the common duct. In only ten instances was this possible. Of the ten in which the probe passed freely five to fifty per cent. presented calculi in the gall bladder, while of the eighty-seven in which the probe could not be passed seven or only eight per cent. showed calculi."

THE MEDICAL DEPARTMENT OF HAMLINE UNIVERSITY.

In another column will be found the names of the recent graduates of this college, all of whom passed the State Board of Examiners with high credit. This department of Hamline University, formerly known as the Minneapolis College of Physicians and Surgeons, the advertisement of which appears in this journal, continues to maintain the high reputation it has acquired for graduating classes of excellent standing in the profession.

By vote of the Board of Trustees a committee has been appointed with authority to erect a suitable building for the accommodation of the school for the coming season, and located near the city and other hospitals, the plans of which have been adopted. With new and excellent class rooms, and increased facilities for giving instruction, the faculty can look confidently forward for the prosperity of this institution. The professors are competent and enthusiastic in their work, and deserve the confidence of the community and the students seeking an entrance into the medical profession. A cut of the new building will appear in our next issue.

THE DISINFECTION AND THE DISINFECTING POWER OF THE SKIN.

Dr. R. Binaghi ("Centrb. f. Chirurg."), as a result of many experiments, found that after an ordinary cleansing of the hands, followed by simple drying, the number of bacteria was invariably increased (due, doubtless, to the softening of the outer layers of epidermis). After washing in soda solution and repeated rubbing with a dry, sterile towel, the number of bacteria was lessened; also after soaping and scrubbing; also after washing in alcohol or ether. As disinfectants, the following agents gave the best results: Corrosive sublimate, 1 in 1,000; carbolic acid, 5 per cent; and potassium permanganate, 1 per cent. A simple long-continued washing with any one of these solutions (without previous preparation) never sterilized the skin. For complete sterilization the author recommends the following procedure:

1. Wash and scrub in warm soap and water.
2. Wash in warm alkaline solution (soda or soda carbonate, 5 per cent).
3. Sterilized water.
4. Rub with sterile towel.
5. Alcohol or ether.
6. Warm sublimate solution, 1 in 1,000.

This invariably produces sterility of the hands.—London Health.

Reports of Societies.

HENNEPIN CO. MEDICAL SOCIETY.

The annual meeting of the Hennepin County Medical Society was held at the Public Library, Dr. L. R. Nippert presiding.

The minutes of the last semi-annual meeting were approved as read.

The report of the special committee on revision of the fee bill, which was laid over from the last meeting, was taken up, and consideration thereof was, on motion, deferred till the next meeting, the report being placed on file.

The Board of Censors having reported favorably on the names of Drs. Lester W. Day, J. Frank Corbett, Mary Towers and D. R. Greenlee, the same were duly elected to membership in the society.

Dr. A. W. Abbott presented a sarcomatous ovary, removed by him, with history of the case.

Dr. L. A. Nippert then delivered the annual address which was entitled "Diphtheria—Diagnosis and Therapeutics." (See preceding pages.)

DISCUSSION.

Dr. Sweetser agreed with the president that the antitoxin is a very valuable remedy, but thinks the possession of a specific may make us careless. The cause of death may be secondary infection or other complications. He cited a case in which the patient was dying rapidly of uræmia and recovered rapidly under appropriate treatment. Attention should be paid to the membrane. The disease is local, not constitutional. The habitat of the germ is beneath the membrane and we should avoid infection if possible. He had found most satisfaction in using a solution of papoid in glycerine, which usually dissolves the membrane in twenty-four hours.

Dr. D. E. Smith advocated local treatment. He uses a steam atomizer with Sodium Hyposulphate. He cited a case with long continued anæmia, temperature and albuminuria, followed by post-diphtheritic paralysis.

Dr. J. F. Corbett, speaking from the standpoint of the health officer, wished to refer to so-called "Catarrhal" Diphtheria. The degree of infection does not necessarily correspond to its virulence, but very close contact is usually necessary to contract the disease from the "catarrhal" cases. Diphtheria may be localized in other parts than the throat. He cited a case of discharge from ear in which Klebs-Lœffler bacilli were found which persisted under hydrogen peroxide, but disappeared under 1-1000 bichloride.

Dr. Knights cited a case of infection of the navel in a girl of 12 years occurring a few days after the Klebs-Lœffler bacilli disappeared

from the throat. In this case also hydrogen peroxide did not discourage the bacilli. They were destroyed by ¼ of 1% formaldehyde. He questioned whether the use of a swab with young children who struggle does not do harm by lacerating the mucous membrane. Gargles do not reach the parts affected. He would use the swab only when it can be very carefully applied. Streptococcus infection occurs only through a lesion of the mucous membrane and is the especially dangerous complication, aside from laryngeal obstruction.

Dr. Cotton cited a case requiring intubation in which the tube, having been introduced twice, on account of dyspnœa, the last time allowed to remain a week, death immediately followed extraction, in spite of tracheotomy, and the cartilage of the larynx was found to be softened so as to allow the larynx to collapse.

Dr. Haggard cited an intubated case in which spasm of the glottis followed extraction of the tube, which was immediately reintroduced. At the final extraction a solution of eucaine was employed in the throat with the result that spasm did not occur.

Dr. Nippert, in closing, said that in laryngeal cases the use of the antitoxin often rendered the tube unnecessary, and when necessary it could be earlier removed. He referred to the necessity of always being ready to reintroduce the tube immediately.

Dr. Mary Whetstone moved that a committee be appointed to confer with the health officer as to the carrying out of certain recommendations contained in the address. Motion carried. Drs. Whetstone, Sweetser and Weston were appointed as such committee.

The annual election resulted in the choice of the following gentlemen:

President—Dr. H. B. Sweetser.

Vice-President—Dr. Knut Hoegh.

Secretary—Dr. F. A. Knights.

Treasurer—Dr. R. E. Cutts.

Librarian—Dr. G. D. Head.

Censors—Dr. C. G. Slagle, Dr. J. H. Stuart, Dr. R. J. Hill, Dr. G. D. Haggard, Dr. H. Cotton.

Executive Committee—Dr. J. W. Little, Dr. R. E. Cutts, Dr. C. H. Hunter.

On motion of Dr. Cotton the society voted that an order on the treasurer for the sum of $50 be drawn in favor of the Public Library.

The society then adjourned to meet in September.

ONE ON THE SURGEON.

A noted surgeon of London, who was called to attend the Queen just at his lecture hour at one of the large colleges, had written upon the bulletin board, "Dr. ——— will not lecture today. Gone to attend the Queen." Some miscreant wrote underneath the message "God Save the Queen."

AMERICAN MEDICAL ASSOCIATION.

(Reported by Fassett's Bureau of the Medical Press.)

The semi-centennial year of this organization was celebrated at Columbus in true "Buckeye" style. The meeting was characterized by a large attendance, interesting papers and hot weather. The local profession, aided by the Columbus Board of Trade, combined to make the occasion a memorable one, and certainly proved Columbus to be as hospitable a city as there is in the land. The Governor's reception, at the Great Southern and the ball at the Columbus Auditorium were the events of the season. Those who were fortunate enough to be present will carry away pleasant recollections of the Capital City's fair ladies and gallant men.

The scholarly address of the president, Dr. Joseph M. Mathews of Louisville, on "Our National Body; Its Purposes and Destiny," contained many valuable suggestions. Dr. Mathews said: "I imagine that when the father of this association called around him a few devoted friends, accomplished physicians and surgeons, and effected an organization to be known as the American Medical Association, their first thought was the unification of the profession which they loved so dearly. Sacrifices and great personal discomforts were endured by them to obtain the good, but the splendid results were evidenced in the assembled body. Some must be teachers or instructors and others listeners; they each in their way contributed their mite. It frequently happens that some member from a far-off and sparsely settled country had heard some truth that, in its application, might save a life, or in return he might give an experience which might prove of incalculable benefit to his more fortunate brother. This possibility should rule out class legislation." Dr. Mathews urged that the association should admit all those who represented honesty, fair dealing, and who entertained an earnest desire to elevate the standard of the medical profession and of the association.

He recommended Washington as the proper home of the association, adding that he thought the distinguished body gained no dignity by traveling about, to say nothing of the inconvenience and expense imposed upon a local profession. This suggestion, however, did not obtain the sanction of the committee. Dr. Mathews recommended as an easy solution of the heated annual discussion over the permanent secretaryship, that the editor of the Journal be made also the secretary. This matter was taken up later and the secretaryship placed in the hands of Dr. Simmons, the editor. This relieves from duty Dr. Atkinson, who for twenty-five years has served the association in the capacity of secretary. A goodly

portion of the address was devoted to the consideration of tuberculosis, anti-vaccinationists, and syphilis. Dr. Mathews closed with an appeal to the politicians for harmony, saying in part, "Let me beg of you that this meeting be one of perfect harmony and peace. Let nothing of an acrimonious nature be indulged in, but rather let your deliberations be characterized by patience, love for each other, and a desire to ennoble the profession to which you belong."

The association unanimously adopted resolutions indorsing a public health bureau, with a cabinet officer at its head, and also to set aside a sum of money for the use of the legislative committee.

Dr. J. C. Wilson of Philadelphia delivered a masterly address on Medicine, and Surgeon-General Sternberg showed a series of stereopticon views, illustrating the hospital ship and the camp as they existed in the Spanish-American war.

The association adopted resolutions urging local boards of health to enact laws making vaccination compulsory. A resolution was also adopted calling for the appointment of a committee of five to consider the best means of treating tuberculosis and preventing its dissemination.

The nominating committee made the following selection of officers for the ensuing year:

President, Dr. W. W. Keen of Philadelphia; First Vice-President, Dr. C. A. Wheaton of St. Paul; Second Vice-President, Dr. E. D. Ferguson of Troy, N. Y.; Third Vice-President, Dr. G. M. Allen of Liberty, Mo.; Fourth Vice-President, Dr. W. E. D. Middleton of Davenport, Ia.; Secretary, Dr. George H. Simmons of Chicago; Assistant Secretary, Dr. J. A. Joy of Atlantic City, N. J.; Treasurer, Dr. H. P. Newman of Chicago; Judiciary Council, Dr. J. D. Griffith of Kansas City, Dr. J. E. Cook of Cleveland, Dr. J. H. Baillache of Washington, D. C., Dr. J. B. Lewis of Topeka, Dr. J. W. Irvin of Louisville and Dr. Frederick Holme Wiggin of New York.

The session of 1900 will be held at Atlantic City, N. J., and we venture to offer the suggestion that this meeting be held two weeks later, in order to secure full attendance of the doctors and their families. The schools in various parts of the country will be out by that time and a better opportunity afforded to give our wives, sons and daughters a pleasant outing at the seashore. C. W. F.

Dr. F. S. Morris of McCook, Nebraska, utilizes the instinct of carrier pigeons to inform him of the condition of his patients who reside far away from his office. By leaving several pigeons at a patient's home the family can send one or more messages as to the condition of the patient daily.

Progress of Medicine.

MEDICINE.

UNDER THE CHARGE OF
J. W. BELL, M. D., C. H. HUNTER, A. M., M. D.
J. H. STUART, A. M., M. D.
DAVID OWEN THOMAS, M. D., M. R. C. S.

SEED AND SOIL OF TUBERCULOSIS

Dr. McGillicuddy, of New York (Jour. Am. Med. Ass'n), points out the similarity of the physiology of man and plants. As the lungs are to man so are the leaves to plants. Earth, sap, plants: food, blood, body. If the earth fails to nourish the plant, the leaves begin to wither and die. If food ceases to nourish properly the body the lungs begin to fail. The yellow sickly leaf has less resisting power than the green and vigorous one; in like manner the tubercular bacilli find favorable soil in a weak, unnourished and impoverished lung. This microbe is one of the germs of decline and decay, and it is in the lung and other parts affected that the bacilli, acting under the great and beneficent law of nature, which thus provides for the disintegration and return to dust of that which has passed its usefulness and lost its vitality, begin and carry on their mission. To check the deterioration is the first step in the restoration of health.

J. H. S.

CONCERNING THE TREATMENT OF CONSUMPTION.

Dr. A. B. Farnham (Boston Med. and Surg. Jour., April 13, 1899) gives a brief outline of an excellent method of treating consumptive patients according to the present trend of professional opinion.

The patient should have plenty of fresh air, day and night, in all kinds of weather, and sun light when obtainable. He holds that winds are not harmful to patients, provided the back is turned to them and the patient does not sit improperly exposed. The patient should not talk when walking or exercising in the wind, and he should habitually breathe through the nose. Exposure to the weather is far preferable to being shut up in stuffy, ill-ventilated rooms. The patient should be warmly clad in light-weight woolen garments.

Careful attention should be paid to the stomach. It is not proper to force the eating, for if other matters are properly attended to the appetite will come all right. Keep the mouth, teeth, tonsils, throat and upper air passage clean by spray and other means. It often happens that through imperfect expectoration bits of sputa cling to portions of the mouth and fauces and thereby impair the ap-

petency for food. The author recommends that during the morning cough, to clear the lungs of the accumulations of the night, the patient lean over the side of the bed in the prone position, with head much lowered to facilitate more perfect cleansing. The sputum is to be cared for after approved methods.

Bathing should be practiced twice a week, rapidly bathing a part of the body at a time with massage.

Intelligent attention should be given to lung gymnastics with the view of dilating the lungs, distending the alveoli and clearing out the small tubes. Local catarrhs make excellent soil for the development of the bacilli. Keep the good lung at work.

The introduction of ozone and vapors are commended. For the latter the writer favors a mixture of pine needle oil, creosote and eucalyptus. He also speaks favorably of the high tension battery, having for some time used the Lesla-Thompson instrument.

For internal medication strych. sulp., creosote and guiacol valerianat, hold the leading and well nigh exclusive place. The first mentioned to be given in large doses as high as one-sixth of a grain and even higher if toleration be established.

For the attendant fever (and presumably care is taken to keep a record of temperature) no special medication or treatment is resorted to beyond rest. The same is observed also with regard to sweating and cough. For the latter, when medicine is resorted to yerba santa is preferred.

The writer closes his paper with the remark that the best remedy for phthisis is brains, skill and honesty on the part of the physician in charge.

A pretty general survey of the current literature on the management, treatment or therapeutics of consumption indicates that whether in homes, hospitals or sanatoria the above or very similar methods are insisted upon.

Except as adjuvants for the purpose of improving the nutrition in the several ways by which this can be accomplished, the internal use of medicines seems to be less and less insisted upon. As a germicide it can hardly for a moment be maintained that creosote is of value, especially in the localities in which are usually the ravages of the bacilli. If it soothes the cough or lessens expectoration it is doubtless indirectly of value. Being an active antiseptic the value of its presence in the alimentary canal whose function is materially impaired, can be appreciated notwithstanding the obvious risks of continued large doses. The same may be said of its congeners. The case is somewhat different with strychnia, but it will require accumulated testimony to establish proof of its efficacy, independent of measures in their very nature far more rational.

Alcohol should without hesitation be avoided, because of its harmful effects, and the use of cod liver oil is at best questionable, not only because of its liability to impair digestion, but also because of its affinity for oxygen it not unlikely interferes with the proper oxydation of the system.

The Murphy method by compression of diseased lung by injections of nitrogen gas is yet in the stage of experimentation, but it is not at all unlikely that it will pass after the manner of the sulphuretted hydrogen gas and other similar suggestions.

Whatever else may be suggested or insisted upon it will remain to be true through it all that the term hygienic management in its broadest and best sense will embody the highest hopes and best expectations of the pulmonary tubercular patient, whether it be pursued at the home, the sanatorium or in a selected climate.

No ordinary hospital into which are admitted patients of other classes is at all suitable for the care and management of consumptive patients for various reasons.

Special sanatoria ought to be established all over the country, on selected spots for the convenience of such as ought not, or cannot remain at home, or make a change of climate. This class no doubt constitutes the majority because of their limited means. This fact, together with another consideration, viz: that cures are more likely to be more lasting if effected in the climate in which the patient will most likely have to remain, makes it necessary that most consumptives must be treated near home or be left to ordinary inefficient measures.

Sanatoria erected in localities combining the several desiderata believed to be beneficial for this disease, such as light, dryness, suitable temperature, altitude, etc., will, for a while at least, be most sought after by those who can. Homes or sporadic living in most favorable climates, and individual engagement or occupation, by which each person can earn a living or secure the benefits of congenial pursuits, constitutes the ideal method of consumptive management. Out door work in the soil, such as farming, gardening, fruit raising, flower growing, and raising small beries by those, to whom these employments are congenial, stands at the head.

In the arid regions of our continent, especially where irrigation is feasible, are to be found ideal homes.

The Pecos valley in New Mexico, Western Kansas and Nebraska, portions of Colorado and Arizona, offer such opportunities.

Dr. W. S. Watson, of Riverview Sanatarium on the Hudson (Jour. Am. Med. Ass'n) having been over the ground and looking up this matter, makes some pertinent remarks, especially

with reference to the climate, etc., of Old as well as of New Mexico.

The chief points of importance in climatic conditions are those favorable to non-development, retardation and cure of consumption, which are dryness of air, freedom from micro-organisms, irritants and noxious gases, the largest amount of sunlight practicable, diminished barometric pressure, ozoniferous atmosphere, and fitness for out door life during the greatest possible amount of time. The high altitudes in the regions above indicated including Old Mexico are the safest and most advantageous regions known.

The Republic of Mexico, with an elevation from 3,000 to 7,000 feet above sea level, offers even more and better advantages, perhaps, than the favored portions of our own Republic. He commends the Mexicans, especially the inhabitants of the City of Mexico—"The Rome of America"—as a liberal, hospitable, refined and cultured people.

The above advantages of climate pertain to the early stages, before destructive changes occur. After cavities are formed the advantages here are questionable, because of the dryness, the bare surface and frequent high winds, which give rise to frequent sand storms which well nigh suffocate the sound lungs, to say nothing of the bronchial irritation which attends consumption.

In high altitudes there is an increase of blood circulating through the lungs, hence increased metabolism and tissue changes. Deep breathing tends to improve nutrition and glandular secretions, which are in turn accompanied by delightful and stimulating effects upon the nervous system.

J. H. S.

Mr. Smith (bent into the shape of an interrogation point with hepatic colic)—
Oh Doctor, dear Doctor—gee whizz! ouch! great Scott!
My guts are tied up in a double bow knot!
I'll give all I've got in this world with delight,
If you'll help—O-oo-oo!—help me out of this plight!
And the doctor soon eased him, and solved every doubt,
And tenderly watched him, till "up and about."
The doctor (one year later)—
Mr. Smith, I am very hard up, would you care
To pay me a little, if you have it to spare?
Smith (in an injured tone)—
Pay you? Ah yes, I remember it now,
But I'm sure I'd got well just the same anyhow;
You must wait till I've paid much importanter debts,
Sech as club dues, and pew rent, and lost 'lection bets.

—Med. Gleaner.

OBSTETRICS.

UNDER THE CHARGE OF
A. B CATES, A. M., M. D. R. E. CUTTS, B. S., M. D.

THE POST PARTUM MANAGEMENT OF UTERINE DISPLACEMENTS.

E. C. Savidge, in New York Medical Journal, March 11th, 1899, considers post partum displacements due to enfeebled muscular power, measures for the improvement of which should be applied early in pregnancy or even before conception. Over-stretching of the perineal muscles by prolonging the second stage of labor is to be avoided; a laceration immediately repaired, is to be preferred. Such muscles are virtually henceforth dilated muscles and are incapable of performing their work just as much as a dilated heart.

Trusting post partum cases to nature is condemned. During the puerperium, or until the uterus resumes its normal size, the patient should be under observation. When the puerperium ends, which may be six weeks or three months, is a question of fact and not of dates. Until involution is complete some support should be used preferably in the form of a tampon to prevent stretching of ligaments and muscles. Engorgement of the tissues is to be relieved by medication of the tampon; lacerations of the perineum are to be repaired, no matter how small, while those of the cervix will often heal spontaneously if proper local attention be given them post partum.

R. E. C.

THE EARLY DIAGNOSIS OF PREGNANCY.

Braun-Fernwald, in the Brit. Med. J., May 6th, 1899, considers Hegar's sign the most reliable for early diagnosis of pregnancy. This is produced by an abnormal thinness, softness and compressibility of the lower segment of the uterus, or that part above the insertion of sacro uterine ligaments, the bimanual examination being carried out with one finger in the rectum. With this sign pregnancy can rarely be diagnosed before the end of the second month. The writer concludes from investigations held in Braun's clinic, during the last five years, that the most important early sign of pregnancy is a change in the shape of the body of the uterus, as well as in the softness, one side being thicker than the other. Even as early as the end of the first month one side and horn of the uterus may be doubly as thick as the other. This horn is not only thicker, but softer, while the other may more nearly resemble the non-pregnant uterus. The soft and large horn and segment of the uterus encroaches upon the other, even passing beyond

the middle line and at the junction of the two there is a distinct longitudinal groove. The fundus may be saddle-shaped, due to the same cause.

The probable explanation of the difference in size of the two parts of the uterus is that the ovum becomes fixed on the one side and enlarges with the ovum, while the sulcus in the uterus would indicate the margin of the ovum. The enlargement may be so striking that the larger horn may be mistaken, by one inexperienced, for a small myoma. The earliest time in which diagnosis was made was three days after one period had been missed. When hemorrhage has occurred, he claims that by this sign one can tell whether abortion has occurred. If the sign is positive the ovum is still there. Its absence, when other signs of pregnancy are present, would point to a probability of extra uterine pregnancy.

R. E. C.

PEDIATRICS.

UNDER THE CHARGE OF

H. B. SWEETSER, M. D. J. P. BARBER, M. D

SUMMER COMPLAINT IN CHILDREN.

This trite, but at this season of the year, very important subject is considered by Fischer, in the Medical Record of June 17, 1899. Although he advances nothing new, still the paper is valuable in that he states facts in treatment, which should be matters of routine for all of us, but which, apparently, we are liable to forget.

In this disease nature's first effort is to empty the digestive tract of offending material by vomiting and diarrhoea. It is a wise plan to aid nature in this effort, and the safest means we have for accomplishing this is either castor oil or calomel. Calomel has the added advantage of being an intestinal antiseptic.

Irrigation of stomach and bowel with salt solution is also of considerable value, not only cleansing the canal, but providing, by absorption, a needed increased volume of blood. The stomach flushing should be done by the physician personally, to guard against the disaster of inadvertently flooding the lungs through the larynx—an accident which happened to a trained nurse with one of the author's patients. The bowel douche should have a temperature of 110° F. and undue pressure is avoided by raising the syringe only two feet above the child's body.

Diet, however, plays the most important part in the management of a case of summer complaint, and, if faithfully carried out, will do more toward the completion of cure than almost all medicinal treatment. The first point to be borne in mind is to discontinue all kinds of food which were being given at the time of the attack, and this applies with especial emphasis to milk, which, in hot weather, is so easily contaminated, and therefore so difficult to obtain pure, and, moreover, which, even when given pure, readily decomposes in a stomach below the normal digestive capacity. Instead, give some food easy of digestion and assimilation, readily made and easily preserved. Thus may be given plain barley water, mutton or chicken broth thoroughly skimmed, expressed meat juice, or even plain water. The return to milk should be very cautious.

Environment plays an important role. The child should be kept in a cool temperature if possible, and the clothing should be light and loose. A very important point is the enforcement of change of air. It is a well-known fact that a child suffering from summer complaint in the midst of a warm city will suddenly become almost constipated if given a sea voyage, or upon being removed to the country.

Drugs, if the above dietetic and other rules be disregarded, are worse than useless.

H. B. S.

THIGH FRICTION IN INFANTS.

Griffith (Archives of Pediatrics, May, 1899) reports two cases, and Louis Fischer, in the same journal, another of masturbation in young infants by thigh friction. The practice began in two of the cases at the eighth or ninth month, and one at the twelfth. The symptoms are described by Griffith as follows: The child at first in the sitting posture, would throw her hips down, usually place one foot upon the thighs down, usually place one foot upon the instep of the other, and make decided, although slight, friction of one thigh against the other. All this was done silently, the silence sometimes attracting the attention of the nurse or parents. If the motion was allowed to go on profuse perspiration would break out about the head. At times, when there was reason to believe that masturbation had been carried on for some time while unprevented, the child would have a very exhausted appearance and be wet with perspiration, especially of the head; occasionally the act appeared to have been performed during sleep.

It is believed that this trouble exists far more often than it is recognized, and that by careful questioning of parents and nurses some obscure cases of fretfulness, innutrition, exhaustion and wasting can be explained by it. All the cases reported, and there are only a few scattering ones, have been in female children. Griffiths says it is difficult to see how a thigh friction could be practiced by a male infant; although he is not prepared to say that it cannot be done.

The treatment consists of the maintenance

of the strictest cleanliness, the use of mild astringent washes and ointments, and especially in constant watching. In Fischer's case the prepuce of the clitoris was adherent and this was believed to be the cause of the trouble. After several months of medicinal treatment, by various methods, without improvement clitoridectomy was performed, and a perfect cure was the result.

J. P. B.

"KOPLIK'S BUCCAL RASH IN MEASLES."

Sobel (in the Medical Record of June 3, 1899) treats of the great value, from a diagnostic standpoint, of Koplik's buccal rash. He adds a series of thirty new cases, making sixty-five in all, in which a diagnosis of measles was made, even as early as seventy or even ninety-six hours before the appearance of the cutaneous rash, and in no instance was there an error. On the other hand, during the invasive stage of various diseases, as la grippe, coryza, tonsilitis, German measles, bronchitis, etc., and in many of the skin diseases, as eczema in its various forms, scabies, varicella, pediculosis, impetigo, erysipelas, erythema multiforme, etc., this phenomenon has been uniformly absent. The importance of this diagnostic test lies in its early appearance, and if further investigation shows it to be so uniformly and invariably present as its author claims, then it will go a long way in aiding to limit the spread of measles.

H. B. S.

Neurology and Psychiatry.

UNDER THE CHARGE OF

R. O. BEARD, M. D., W. A. JONES, M. D.

A CASE OF NEURALGIA OF THE JOINTS.

(Ein Fall von Arthroneuralgic.)

By Dr. Miecislaus V. Nartowski.

Arthroneuralgia was first described by Brodie in 1822, and is considered by most authors as a manifestation of Hysteria. The case described by Nartowski (Wein. Medicin. Wochenschrift, May 20, '99) bears out this opinion.

The patient, Anna G., 32 years of age, complains of pain in the knees and a weakness in the feet, from which she has suffered for the past two years, since the occurrence of a fright. The family history is neurotic, and the patient herself as a child was irritable and intractable. She was married at 23 and has had three children, the youngest of whom is four years old. She complains now of feeling often as if a ball rose from her abdomen to her throat.

On examination the patient appeared to be well nourished, and all the bodily functions were in normal condition. The patellar reflex is increased, both knees are somewhat swollen, they are fixed in a position of extension and show hyperæsthesia to light touch, while deep pressure gives no pain. This hyperæsthesia is especially marked on the inner aspect of both knees and in the popliteal space; and there is also increased redness and temperature for 10 cm. above and 13 cm. below the joint. This latter condition is especially marked during menstruation, but there is also a daily variation in temperature, the lower extremities being cold in the morning and hot toward night. Both active and passive movement of the knees is painful.

Treatment consisted in convincing the patient of the possibility of a cure, then in massage for five days until the swelling was reduced, followed by three applications of the electric spark. The cure was complete, and has continued for six months, although there is certainly great likelihood that the trouble will at some time return. W. A. J.

ENCEPHALITIS OF THE PONS IN CHILDHOOD.

(Zur Encephalitis pontis des Kindesalters, zugleich ein Beitrag zur Symptomatologie der Facialis und Hypoglossus Lahmung.)

By H. Oppenheim.

The author describes (Berlin Klin. Wochenschrift, May 8, 1899) the case of a young woman of 19 years, otherwise well nourished and vigorous in appearance, who asks for the relief of a facial defect of long standing. The history shows that at the age of one year she was taken ill with convulsions and loss of consciousness which continued several days, and that on recovery there was a paralysis of the left face, the eye being open and the mouth drawn to the right. This gradually improved until the eye could be closed, but there remained a twitching in the muscles of the left face and chin, a feeling as if the left upper lip were too thick, and some hindrance in speech. The examination showed a paralysis of the left frontal muscle, normal movement of the Orbicularis palpebrarum, and lid reflex to touch and light normal. The left lip and chin show fibrillary twitchings which now and then resemble those of convulsive tic. The raphe of the tongue shows serpentine deviation, first toward the left and then toward the right, the tip lying to the left. The left half is also smaller than the right. The movements are normal. Pharynx and larynx are also normal.

The electrical examination is important. The left side shows some slight loss of excitability, and the Platysma myoides gives no reaction, even to strong currents, except in a

narrow strip near the middle line. Of special interest is the observation, however, that stimulation of the right facial gives contraction in the left chin and lower lip muscles. This occurs with a current strength which produces even in the right side either no movement or a very weak one, and which applied directly to the left side gives absolutely no reaction. In the lower extremity it is noteworthy that the right patellar and Achilles reflex are somewhat stronger than the left.

The author's diagnosis is that the case is one of infantile paralysis; a pontine or bulbar infantile paralysis. In other words the process of Poliomyelitis or Encephalitis acuta has attacked the centers of the pons in this instance. The cross-sided reaction to electricity is explained by supposing that the collaterals from the right nerve are sent to the muscles near the middle line on the left side. Were it a reflex phenomenon through the brain the contraction on the left side would be a trifle slower in time than on the right, and this does not occur. W. A. J.

A NEW SYNDROME FOLLOWING A WOUND OF THE SPINAL CORD.

(Nouveau Syndrome Consecutif a une Blessure de la Moelle.)

By L. Minola, Archives de Neurologie, May, 1899.

Julia Munoz, age 40 multipara, received June 10, 1896, a stab wound between the seventh and eighth ribs on the right side at a distance of 6 cm. from the apophysis of the dorsal vertebræ. This was followed immediately by a complete flaccid paraplegia with disturbance of sensation. In the right lower limb there was a complete anæsthesia to all forms of sensation from the level of the hip joint to the tips of the toes. During the first week the following evidence of allochiria was noted: When a warm body was placed upon the right knee the patient pointed with her left hand to the left knee and referred the sensation of warmth to that point. The left lower limb showed marked hyperæsthesia. At first also there was found a point on the back three finger breadths above the wound which was hyperæsthetic; two weeks later a similar point developed in the right sacral region. The patellar reflex was absent on both sides and the plantar appeared only on the left. The rectum and bladder showed no abnormality.

The subsequent course of the disease was as follows: Motion reappeared earlier in the right extremity than in the left, and in both motion appeared first in the proximal portions and later in the distal. Flexion was better performed than extension. By October, 1896, the right extremity was performing all the ordinary movements, while the left could only with difficulty perform flexion of the foot and toes, and extension of these parts was impossible. In the meanwhile it was observed that movements occurred in the left foot during sleep which were impossible in the waking state. Attempts at walking caused trembling of both extremities, but most marked in the left. This trembling finally disappeared entirely on the right side but increased on the left, where there also developed a contracture which placed the foot in forced extension so that the toes alone touched the ground. (Equino-varus.) By June 11th, 1898, this condition was already established, and note was made that the right patellar reflex was slightly increased and there was no clonus, while on the left there was marked exaggeration and clonus. No atrophy appeared in either extremity. The anæsthesia of the right extremity disappeared rapidly in certain regions, leaving, however, isolated areas which recovered much more slowly. By June 11th anæsthesia still persisted over the great toe, along the inner side of the foot and over the internal malleolus.

The author shows that this case is in accord with the experiments of Mott on monkeys, in which he demonstrated that hemisection of the cord produced no changes on the opposite side, but on the same side there occured hemiparaplegia and hemianæsthesia accompanied with allochiria. These experiments, as well as the present case, refute the theory of Brown-Sequard that the sensory nerves cross in the cord at the level of entrance, and upheld the claim of Ramon y Cajal that the sensory fibres do not decussate but bifurcate, forming a Y, and continue upward with the fibres of the posterior column to finally terminate by free aborization in the gray matter of the posterior horn.

The symptoms in the case related can be explained by supposing that the instrument divided completely the right side of the cord and that its point injured the intero-lateral portion of the left half, which includes the pyramidal tract.

The author does not discuss the question of why there should have been complete recovery on the side of the hemisection, and such marked secondary degeneration on the side of the less complete lesion. W. A. J.

INSANITY DEFINED ON THE BASIS OF DISEASE.

In a brief but very clear article by C. H. Hughes, M. D., under the above title in the Alienist and Neurologist of April, 1899, the author gives the following sentences. "We no longer beg the question. We understand that insanity stands on the same basis as all other diseases—plus another organ. Not exactly as

liver secretes bile in its physiological state does the brain secrete mind. We do not now express the formula in the exact phraseology of Cabanis, but we say, as the brain in good anatomical condition is necessary for the physiological expression of mind, so the mind when it expresses itself to the world in a pathological manner, obeys the laws of all other diseases. Its organ, the brain, is wrong either functionally or structurally, primarily or secondarily, either in the intimate structure of the neurons or in their relation to each other in the cerebral cortex, or by reason of their abnormal blood supply, or by reason of changed conditions of nutrition of metabolism or whatever it may be. We need never be at sea before any court, before any jurist, in giving our views of insanity as a disease, primarily or secondarily involving the brain of the individual so as to produce in him a change in the natural habits of thought, feeling or action —a change of his normal, natural, mental expression by which, or by reason of the disease underlying all, he is placed out of harmony with his surroundings, with his natural self or his normal family type of mind."

W. A. J.

A CASE OF GLIOMA OF THE LOWER CERVICAL REGION OF THE SPINAL CORD.

Producing a Total Transverse Lesion, in Which There Was Spasticity of the Lower Limbs and Persistence of the Deep Reflexes.

The complete report, by W. H. Hudson, M. D., Lewellys F. Barker, M. D., Simon Flexner, M. D., of this very interesting case is published in the form of a monograph, but a resume illustrated with four very fine plates is given in the American Journal of Medical Sciences for June.

The patient when first seen by Dr. Hudson, in 1890, was a man of fifty, whose family and personal history was free from any record of either syphilis or tuberculosis. Six months previously he had been thrown from a horse, and to this injury he attributed his symptoms, which then consisted chiefly of pain along the spine from the dorsal regions downward and burning in the legs and feet. The knee-jerks were exaggerated; he swayed when standing with his eyes closed. He grew worse on specific treatment, his legs became almost entirely helpless in 1891, and completely so in 1895. By this time sensation had become lost as high as the nipple line. He had never had the excruciating pain common in spinal tumor, but there had been moderate pain along the spine and well marked girdle pain. The slightest irritation caused violent spasmodic contractions of the muscles of the legs. By December, 1896, his stomach was very unretentive, he was dyspnœic, and his breathing was entirely diaphragmatic. His pupils were small and reacted imperfectly. Sensation in all parts was lost below the third rib in front and the spine of the scapula behind. Above this there was some hyperæsthesia. The legs were rigid and entirely paralyzed, but there was no atrophy except in the interossei of the hand. The skin reflex was present in the legs and feet; there was violent ankle clonus and some exaggeration of the knee-jerk. The diagnosis was an intradural tumor, which was probably intramedullary.

On autopsy a tumor was found involving the substance of the cord, and extending from the level of the fourth cervical to that of the third dorsal vertebra. The upper five centimeters of this consisted chiefly of a tumor reaching nearly throughout the whole lateral extent of the cord and ending above and below in two cone-like projections, one of these being continued downward in the form of a central stem of what appeared to be gliomatosis. This stem was surrounded by softened cord. Microscopical examination showed that the tumor consisted of a very large number of much thickened blood vessels, many of which showed hyaline degeneration, of fibres, and of cells which were round, oval, or pyriform in shape. They were somewhat irregularly arranged, but often appeared to radiate from the blood vessels. In many places there was blood extravasation. The stem of gliomatosis contained large numbers of peculiar bodies consisting of collections of waxy looking material, apparently the result of degeneration of the protoplasm. With the Weigert-Pal staining method they appear black.

Many cavities both large and small were present, some preformed and others due to softening. The preformed cavities were enclosed by a layer of fibres like that around the central canal of the cord, and upon this layer was a membrane lined with high epithelium. There have been hemorrhages into these cavities, and there was granular material at the edges which looked like degenerated neuroglia.

This case gives conclusive proof that the reflexes may remain when the cord is completely severed if the lumbar enlargement is healthy, and therefore the cutting of the connection with the cerebellum is not the cause of loss of reflexes.

W. A. J.

The baby pickaninny changes in color somewhat as follows, so it is said, from the hour of birth: The negro baby comes into the world a tender pink; the second day it is lilac; ten days afterward it is the color of tanned leather; and at fifteen days it is chocolate. The coloring matter lies between the layers of epidermis.

CLINICAL MICROSCOPY.

UNDER THE CHARGE OF
J. FRANK CORBETT, M. D., G. D. HEAD, M. D.

THE SYMPTOMS OF DUMB AND TRUE RABIES.

The familiar picture of a dog frothing and foaming at the mouth, running through the streets and snapping at everything, is one that strikes terror to the hearts of all. Unfortunately, this is but one phase of rabies of which there are many more. The bite of a dog, that at the time seems only to be sick, may lead to a case of rabies on the part of the one bitten. This is due to the fact that dogs are capable of communicating rabies several days before any positive symptoms appear. There are two kinds, dumb rabies and true rabies. In dumb rabies the dog does not try to bite, in fact cannot, for the jaw is paralyzed as indicated by dripping saliva. The animal is reticent and hides away from observation and finally passes into paralysis and death.

In typical rabies the dog passes from a depressed nervous condition to mania, delirium and finally paralysis. It would seem that the dumb form is but the rabid form with some of its phases left out. This idea is strengthened by the fact that in varying the quantity of rabic material, experimentally inoculated, either of these forms may be produced from originally the same animal. The smaller quantity leading to acute rabies and the larger to dumb rabies. In the early stages of true rabies the dog's entire nature seems changed, a cross dog becomes amiable and an amiable dog becomes cross; he is easily frightened, refuses food, or else attempts to eat it but cannot swallow, or will eat all sorts of trash. Signs of incoördination begin to appear, also trembling; the eye is injected and there is a slight tendency to choke; the voice becomes hoarse and comes deep from the throat. The saliva of a dog in these stages is fully virulent but the symptoms as yet have nothing especially to indicate hydrophobia, as many of these may be absent. The dog tries to doze, but its slumbers are broken; it turns about restlessly; it runs about and snaps in the air and seems to see imagined forms. The dog can still be controlled by speaking to it; it is thirsty and laps water but cannot swallow; it bites everything in reach; can still eat solid food.

From this the animal passes to a state of delirious rage; it attacks all animals within reach, but does not bark as it is wont to do in fighting. It breaks out its teeth and tears its body without any pain. Foam does not drip from the mouth as yet. After the animal has exhausted itself, periods of exhaustion or paroxysms occur. Paralysis of hind legs next follow, the powers of incoördination are lost; the dog totters, gives a slight convulsion and dies. Duration of illness, five to ten days. Of this multitude of symptoms, any or many may be absent, but the points of special importance are the muffled bark, a tendency to snap up foreign material, and incoördination, with, finally, paralysis and death.

A mad dog may be able to eat and even to swallow water at some stages, so it is no evidence of the lack of rabies. On the other hand, perfectly healthy dogs may act in a very peculiar manner; a nervous dog is often subject to having peculiar spells of barking and acting in a crazy manner. There are certain pathological conditions in the dog which give rise to symptoms somewhat similar. Among these conditions are meningitis, intestinal parasites and nephritis with uræmia. These are often mistaken by the laity for true cases of rabies.

In the rabbit, the incubation period is from twelve to fifteen days, and the disease from three to five days longer. Incoördination in early stages, and, finally, paralysis, are the main symptoms. The animal tends to crouch in a corner of its box; if it attempts to walk, staggers, and if pushed quickly, rolls over and loses its balance; it cannot raise itself up by shoulder or pelvic muscles, but will kick its hind legs if lifted up, finally dies with paralysis of hind limbs. Incoördination may be supplanted by a somewhat excitive condition. Rabbits do not tend to snap and bite.

The rabic horse tends to kick, bite and tear itself; at times will not eat and tends to fall down suddenly as if shot. This description covers all of the different forms of rabies in animals. Why they should give rise to such varying phenomena, we cannot answer, except on theoretical grounds, but it is certain that this same virus that produces rabies in the dog, with above train of symptoms, will produce the same disease in the rabbit, with different symptoms.

Furthermore, if we take the virus from a dead rabbit and inoculate it into the dog, it produces true canine rabies. We can partly explain this difference from the difference in nature, for in the fierce, carnivorous dog we get a furious madness; in the horse, an animal of considerable spirit, we obtain symptoms resembling these; and in the dumb rabbit we secure only symptoms of incoördination. This goes to show that rabies is a disturbance of the nervous system and is manifest in different ways.

The immediate cause of rabies is unknown, probably some bacilli, cocci or similar organisms. Pasteur once mistook the Micrococcus Tetragenous for the germ of rabies. Many claimants have recently brought forth their own views. It has been claimed that a small thick bacillus with a clear zone center is the

cause of rabies and that this disease has been produced by inoculating cultures of this germ. A Blastomycetes has also been obtained from rabid animals and inoculation with results which seem positive. The bipolar bacillus of rabit septicæmia was once a supposed cause.

That the seat of rabies is in the nervous system is generally accepted as proven. Blood from rabid animals will not produce rabies. Possibly the virus gains admittance to nerve centers through lymphatics, as Pasteur has shown by the following experiments: He inoculated the ear of a rabbit with rabic virus and immediately cut off the ear below site of inoculation with cautery and the animal died of rabies. He also cut off the cord of rabbit and inoculated below site of section; that portion of cord below cut was virulent and that portion above was not. This indicates that transmission is in nerve matter or in structures immediately connected with nerves.

The virus of rabies seems to withstand cold better than heat, for when subjected to temperatures given below, give the following results:

No degree for the period of one week, on inoculation, developed rabies.

Thirty degrees for the period of eight days, on inoculation, developed rabies on the ninth day.

Thirty-five degrees for the period of eight days, on inoculation, developed rabies on the eleventh day.

Forty degrees for the period of eight days, on inoculation, developed only a few symptoms.

Fifty degrees for the period of eight days, on inoculation, developed only negative results.

Commencing putrifaction interferes with virus of hydrophobia, but advanced putrifaction does not. The virulence of rabic material is also affected by drying. Cords that have been dried for a long time gradually lose virulence. Repeated inoculations in the series of susceptible animals shortens period of inoculation and increases virulence, and in a series of non-susceptible animals, lengthens inoculation period, and weakens virulence. For example, by repeated inoculation in rabbits we get a virus (the so-called fixed virus) that will kill in eight to ten days. On the other hand, a hen may die of rabies, but in doing so it destroys the virus.

The only positive point in diagnosis of rabies is transmission from one animal to another, generally accomplished by subdural inoculation. There is nothing pathognomonic in the post-mortem of a rabic dog. Pasteur claimed he could distinguish a brain of a rabic dog from a normal brain. He claimed some difference between the fine granular matter found in brain substance of a rabic dog and that found in normal brain, and further, that the granular matter, if normal, would disappear on being injected into virus of a rabbit dying with rabies, but if from a rabic animal, would not so disappear.

The greater number of animals submitted to the Minneapolis City Laboratory for examination for suspected rabies, upon inoculation have not proven to be rabies, but the post-mortems have shown various conditions. One animal showed evidence of having had meningitis, and rabbits inoculated from the dog died in a few days with no symptoms of rabies, for the inoculation period of rabies is longer and this disease has some well marked symptoms which have been described above. People bitten by the dog, six in all, have remained healthy. A second dog presented a bad condition of kidneys, death being due to uræmia. No result followed inoculation from the medulla of this dog. In a third, the intestinal tract was found covered with pin worms. This case closely resembled rabies but no results followed inoculation. A fourth gave negative results from inoculation and normal condition of tissue. A fifth gave rise to symptoms of true rabies in rabbits.

While we have the series of negative results, on the other hand, a dog may have virulent saliva before he shows any symptoms of rabies and later any or all of these symptoms may be marked.

J. Frank Corbett, M. D.

THE HAMLINE MEDICAL SCHOOL COMMENCEMENT EXERCISES.

The graduating exercises of the medical department of Hamline University took place at the Hennepin Avenue Methodist Church in this city on the evening of June 5th.

Dr. A. F. Irwin of the medical faculty gave an address on "The Riddles of Science" and Prof. Wm. E. Thompson of the general faculty of the university delivered an address on "The Physician from the Patient's Standpoint." Both were well received.

The following is the list of graduates:

Graduating M. D., C. M., Cum Laude—R. M. Burlingame, Ernest G. Sasse, Miss Ellen E. A. Willis, George M. F. Rogers.

Graduating M. D., C. M.—David J. Donahue, James Hynes, Robert J. James, James D. Jones, Adolph E. Loberg, Edward H. Kirkhoff, Charles H. Mason, Fred C. Miller, Carl M. Oberg, Floyd J. Roberts, Daniel L. Scanlon.

Course for Graduates—Titus C. Briggs.

The American Medical Quarterly is a new publication, the first number, dated June, 1899, with publication office at 100 William street, New York City.

Book Notices.

ELECTRO-HÆMOSTASIS IN OPERATIVE SURGERY. By Alexander J. C. Skene, M. D., LL. D., Professor of Gynecology in the Long Island College Hospital, Brooklyn, N. Y.; formerly Professor of Gynecology in the New York Post-Graduate Medical School; Gynecologist to the Long Island College Hospital; President of the American Gynecological Society, 1887; Corresponding Member of the British, Boston and Detroit Gynecological Societies, of the Royal Society of Medical and Natural Sciences of Brussels, of the Obstetrical and Gynecological Society of Paris, and of the Leipzig Obstetrical Society; Honorary Member of the Edinburgh Obstetrical Society; Fellow of the New York Academy of Medicine; ex-President of the Medical Society of the County of Kings; ex-President of the New York Obstetrical Society. New York: D. Appleton and Company. Price, cloth $2.50 net.

The discovery of the ligature was a long stride in the right direction, but the ligature is not a perfect means of arresting hemorrhage for it has its defects and failings when employed in certain operations, and in some conditions catgut has answered so well the requirements of the surgeon that many have rested satisfied that the ideal method had been attained. But catgut is difficult to sterilize, and, when sterilized, it is a difficult matter to keep it so. If applied to a vessel in a septic or necrosed tissue the ligature itself not only becomes septic, but fails to be absorbed. It thus remains as a foreign body preventing the process of repair, and adds of its own self to the culture field of the bacteria. Other objections to catgut are its crispness when dry and its tendency to stretch when soaked. Silk ligatures have also their weak points which we need not specify in this place.

The imperfections of ligatures led Dr. Skene to search for something better in surgical hemostasis. Starting from Dr. Thomas Keith's method of treating the pedicle in ovariotomy by the clamp and cautery, the author had his attention called to the use of electricity in heating laundry smoothing irons, and it occurred to him to adopt the same heating power to surgical instruments, such as the clamp and forceps.

After describing the instruments required in electro-hemostasis, the author shows the application of his method to the various operations, paying special attention to its use in ovariotomy, myomectomy, abdominal hysterectomy, ovario-salpingectomy, and appendectomy. The treatment of uterine carcinoma, pelvic abscesses, tumors of the bladder, rectal hemorrhoids and neoplasms of the skin and mucous membranes is dealt with in an interesting manner and the adaptation of electro-hemostasis clearly shown. The work is well illustrated and the subject dealt with in the excellent style which has characterized the preceding works of this well known author. The reader will be well paid by a study of Dr. Skene's excellent monograph, for the variety of the operations to which electro-hemostasis is adapted and the certainty of its results justify us in predicting for the new method a wide adoption by the surgeons of the future.

A PRACTICAL MATERIA MEDICA FOR NURSES. By Emily A. M. Stoney, "Author of Practical Points in Nursing." Philadelphia: W. B. Saunders. Price $1.50 net.

We cannot agree with those who believe that the less a nurse knows of the treating and curing of diseased conditions, the more closely will she follow the directions of the physician. In our experience the more extensive and accurate the training the better is the nurse qualified to fill the place assigned her by the advanced medical science of today. The work before us is not intended to supply a full knowledge of materia medica and therapeutics, but in a condensed form it gives the nurse a general and practical knowledge of the drugs which are in common use. The chapter on poison emergencies is just what every nurse should be familiar with, while the dose list gives her a ready reference in a case of emergency where, in the absence of a physician, she is expected to act, and must act. We cordially endorse the work before us, and the physician who cannot place it in the hands of his nurse, lest she should be thus enabled to criticise his directions, had better take down his own books on materia medica and refresh his memory.

THE PATHOLOGY AND TREATMENT OF SEXUAL IMPOTENCE. By Victor G. Vecki, M. D. From the author's Second German Edition, revised and rewritten. W. B. Saunders, 925 Walnut St., Philadelphia, 1899. Price $2.00 net.

This work speaks the bare truth in dealing with a delicate subject. The first edition appeared seven years ago and met with a good deal of opposition on acount of the liberal interpretation of some of the questions dealt with. Sexual impotence, besides being a serious disease, is, also, of frequent occurrence, and productive as it is of much mental suffering, a consideration of its pathology and treatment is a duty required of the practitioner. While some portions of the work are calculated to pander to the depraved tastes of the sensual, the book deals in an exhaustive and

scientific manner with the anatomy and physiology of the sexual organs, the forms of impotence, its etiology, diagnosis, prophylaxis and treatment. The work cannot fail to be helpful in the treatment of these difficult and perplexing cases which every physician of experience is constantly meeting.

While we cheerfully acknowledge the value of the treatment recommended by the author in most particulars, we must emphatically disapprove of the sentiments expressed in the following paragraph, p 727.

"As marriage is a heroic and very dangerous remedy not accessible to every one, and as a mistake in this affair is so difficult to correct, many a convalescent patient will be compelled to have recourse to other connections than hymeneal in order to satisfy his sexual desire, if he does not want to become impotent again, or to be troubled again by morbid pollutions. He must satisfy this natural want regularly, and the act cannot be called immoral simply because it is accomplished out of wedlock. Such connections may be unknown to dried-up pedants who have never been young, but every man gifted with a heart and physical power is familiar with these liaisons in all their variations."

TREATMENT OF DISEASES OF THE CONJUNCTIVA—HYPERAEMIA.

Treatment of the hyperaemia of the conjunctiva resolves itself into the removal of this cause. If of passive origin, the removal of the obstruction to the circulation will be followed by the rapid subsidence in the undue vascularity. If of active, the correction of any existing anomaly or refraction or of muscle-balance, or the removal of any foreign body, will accomplish the same result. Dark glasses should be given to protect the eyes from irritating rays of light, and from dust and smoke, and a boric wash or some other mild antiseptic or astringent lotion will, with cold compresses, be sufficient to reduce the vessels to their normal size.

CATARRHAL CONJUNCTIVITAS.

Attention should be given to the general health. Any existing systemic disease, such as rheumatism, diabetes, or albuminuria, should be combatted, shorter working hours should be prescribed for professional men and more exercise recommended; the eyes must be properly protected from the light, air, and dust with smoked glasses, and they should be kept clean from discharge by frequent washings with boric-acid lotion; great relief may also be obtained from the application of ice compresses.

These are best applied as follows: 1. Several pads of gauze of three or four thicknesses, about the size of a silver dollar, are laid on a block of ice. The ice should be suspended in a receptacle with perforations in its bottom which will permit the water and any secretion from the compress to drain off into a jar beneath it. An ordinary kitchen-collander and wash-basin will answer very well for this apparatus. One of the pads is taken from the ice as soon as it has been saturated and is applied to the closed lids, removed in a few moments, and a fresh one substituted for it.

2. Compresses of absorbent cotton which have been soaked in ice water may also be employed. They should be squeezed out sufficiently to prevent any of the water trickling over the patient's face and neck.

3. Cold may also be applied by means of the ordinary douche or by holding a small cake of ice directly to the eye; but these should be discarded for the compress, as they can only be used intermittently.

To avoid repetition it seems well at this place to give the indications which call for the employment of hot and cold compresses, not only in the treatment of catarrhal conjunctivitis, but also of the other forms of conjunctivitis as well.

In hyperæmia of the conjunctiva, induced by ametropia or the presence of a foreign body, we have, in cold, a simple, but effective, means of restoring the membrane to its healthy condition. In these cases the douche or the compress may be applied over the closed lids, with the greatest advantage, for fifteen minutes at a time. The water employed should not be too cold, or excessive reaction may follow its use.

Frequent washing of the eyelids and surrounding skin with warm water and castile soap is the most efficacious home treatment for catarrhal conjunctivitis. De Schweinitz (Philadelphia Polyclinic, April 7, 1894.)

In the treatment of the milder form of conjunctivitis the membrane may be sprayed with a solution of boric acid and salt, the good effects of this plan being probably due to the fact that the liquid thus applied penetrates the deeper tissues and correspondingly increases the extent of the contact and prolongs the action of the drug. De Schweinitz (Amer. Jour. of Opth., St. Louis, Jan., '94.)

FOLLICULAR CONJUNCTIVITIS.

Treatment is the same as for catarrhal conjunctivitis, with the additional indication of bringing about the disappearance of the follicles. This is the best accomplished by insufflations of iodoform, aristol, or calomel. In stubborn cases excision or expression of the follicles has been recommended. The hygienic surroundings should be bettered, if need be, the health of the patient attended to, and all near work prohibited. All errors of refraction should be carefully corrected under atropine.

VERNAL CONJUNCTIVITIS.

The disease is incurable, and palliation of the acute symptoms represents all that can be

done. Van Milligen, who has had excellent opportunities to study the disease in Constantinople, where it occurs more frequently than elsewhere, has employed a solution of acetic acid, one to twenty grains to the ounce, with marked benefit. I have obtained excellent results from the same remedy.

Spring catarrh is an attenuated form of trachoma, the affection of the conjunctiva of the lid being primary and the immediate cause of the hypertrophy of the limbus. Good results obtained from vigorous friction of the lid with mitigated nitrate-of-silver stick. Chibret (Revue Gen. d'Ophtal., March, '93.)—Sajou's Annual and Analytical Cyclopedia of Practical Medicine, Vol. II., pages 341 to 344.

TO ALL WHOM IT MAY CONCERN.

In accordance with instructions given by resolutions passed at the National Convention for Revision of the Pharmacopœia of the United States of America, held in Washington, A. D., 1890, I herewith give notice that a General Convention for the Revision of the Pharmacopœia of the United States of America will be held in the city of Washington, D. C., beginning on the first Wednesday in May, 1900. It is requested that the several bodies represented in the convention of 1880 and 1890, and also such other incorporated state medical and pharmaceutical associations, and incorporated colleges of medicine and pharmacy, as shall have been in continuous operation for at least five years immediately preceding this notice, shall each elect delegates, not exceeding three in number; and that the Surgeon-General of the Army, the Surgeon-General of the Navy, and the Surgeon-General of the Marine Hospital Service shall appoint, each, not exceeding three medical officers to attend the aforesaid convention.

It is desired that the several medical and pharmaceutical bodies and the Medical Departments of the Army, Navy, and Marine Hospital Service shall transmit to me the names and residences of their respective delegates, as soon as said delegates shall have been appointed, so that a list of the delegates to the convention may be published in accordance with the resolutions passed at the 1890 Convention for the Revision of the Pharmacopœia, in the newspapers and medical journals in the month of March, 1900.

Finally, it is further requested that the several medical and pharmaceutical bodies concerned, as well as the Medical Departments of the Army, Navy, and Marine Hospital Service, shall submit the present Pharmacopœia to a careful revision, and that their delegates shall transmit the result of their labors to Dr. Frederick A. Castle, 51 West Fifty-eighth street, New York city, Secretary of the Committee of Revision and Publication of the U. S. Pharmacopœia, at least three months before May 2, 1900, the date fixed for the meeting of the convention.

H. C. WOOD,
President of the National Convention for Revising the U. S. Pharmacopœia, held in Washington, D. C., A. D., 1890.

University of Pennsylvania, Philadelphia, Pa., May 1, 1899.

TYPOGRAPHICAL ERRORS IN JUNE ISSUE.

In Dr. Stuart's article, page 187, second column, the second paragraph, should have read as follows:

(1) That it is an infectious disease, communicable from one person to another; not, however, by contact, as is smallpox, measles, etc., but by the entrance of microbes into the air passages through the atmosphere or into the alimentary canal in connection with some form of food, most commonly milk or meat.

Third paragraph should have read:

The question naturally arises: Do sanatoria* contribute materially to the advantage of the patient in the way of cure, or material improvement of his condition? Have the results of work already done in institutions devoted to this service established their practical value?

And page 188, first paragraph, commencing after the tenth line should have read:
inscription in "Inferno": "Let him abandon hope who enters here."

In Dr. Crosson's article, page 193, first column, the first line under cut belongs top second column.

EXPLANATION.

Dr. A. T. Conley, of Cannon Falls, sends in the following letter from a patient, with interpretation, which will afford an excellent tonic to the weary physician who may have an idle moment on his hands:

PROSPECTUS.

Daer Sir yu Leickt to no how et es wet mer water Last Niet i gat a quit Dal pan ent Sens i got a gut rest Last Nit et was zum mater in et to pan in te siet es most goun mei tung es e bout te sam nor te bouls i tuck kaster oul Sent a botel Caster oul wet te Boe

M. K ———

INTERPRETATION.

Dear Sir.—You like to know how it is with my water. Last night I got a quite deal of pain and since I get a good rest. Last night it was some matter in it? the pain in the side is most gone, my tongue is about the same? nor the bowels. I took castor oil. Send a bottle castor oil with the boy.

M. K ———

Bill Nye once said that a hot-water bag felt like a Mexican hairless dog.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

This progressive society will hold its twenty-fifth annual meeting under the presidency of Dr. Duncan Eve, of Nashville, on October 3, 4, 5 and 6, in the city of Chicago. The committee of arrangement confidently anticipates that this meeting will be a prominent feature in the history of the association, and advances the following reasons for this opinion:

1. The Autumn Fete, to be known as the American Festival, will be held from September 25 to October 9, at which time the president and his cabinet will be the guests of the city during the laying of the corner stone of the new Federal building.

2. The railroad fare from all points to Chicago will be a flat one-fare rate for the round trip.

3. The post-graduate schools of the city propose to arrange for a series of clinics to be given during the festival period by the most eminent teachers in all the medical faculties of this great center, thus affording an extraordinary attraction.

4. Aside from the features mentioned above, there has been for several years past a desire on the part of the members to hold a meeting in Chicago. The accessibility of this city, and its splendid hotel facilities, make it an ideal convention place, and consequently the committee expect more than double the usual attendance at this meeting.

Titles of papers should be sent in at once to the secretary, Dr. Henry E. Tuley, Louisville, Ky.

The exhibit hall will be located on the seventeenth floor of the Masonic Temple. Applications for space should be sent to Dr. J. Homer Cutler, 1010 Memorial Building, Chicago.

A NEW SYMPTOM FOR THE EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS.

Dr. Murat (Gazette Hebdomadaire de Médicine et de Chirurgie, March 5) calls attention to a subjective symptom which he has found very frequently present in the subjects of incipient tuberculosis. It consists of a sensible vibration in the affected appex on loud speaking. Sometimes the patient instinctively tries to diminish this vibration by pressing the corresponding arm against the body. This symptom is a logical consequence of the induration of the lung tissue and is akin in its nature to bronchophony, which it often precedes, however, as Dr. Murat is able to aver from his own observations. If a patient in whom an early phthisical condition is suspected is instructed to make deep local expirations, and his attention is directed to this point, he will generally be able to recognize the vibration on the affected side, as though the tuberculous lung were in relation with the larynx, while no such sensation is perceptible on the sound side. A thorough investigation of this point would, if it substantiates Dr. Murat's opinion, place us in possession of a very valuable aid to the early diagnosis of pulmonary tuberculosis.—N. Y. Med. Jour.

SMALL POX IN THE UNITED STATES.

The following is the total number of small pox cases in the United States from December 31, 1898, to March 31, 1899, as reported to the Supervising Surgeon-General, United States Marine-Hospital Service:

Alabama 127, 2 deaths; Arkansas 8, 1 death; California 82, 15 deaths; Colorado 121, 6 deaths; Connecticut 2; District of Columbia 58; Florida 18; Georgia 312; Illinois 38; Indiana 39; Indian Territory 45 deaths; Iowa 8, 1 death; Kansas 90, 7 deaths; Kentucky 259, 3 deaths; Louisiana 79; Maine 7; Maryland 10; Michigan 16, 1 death; Minnesota 1; Mississippi 17, 3 deaths; Missouri 58, 7 deaths; Montana 2; Nebraska 369, 3 deaths; New Jersey 6; New York 18, 3 deaths; North Carolina 33, 1 death; Ohio 311, 4 deaths; Oklahoma 37, 13 deaths; Pennsylvania 85; Porto Rico 403; Rhode Island 1; South Carolina 10; Tennessee 105; Texas 715, 116 deaths; Virginia 1,658, 14 deaths; Washington 3; Wisconsin 17, 2 deaths; Wyoming 4.

It should be remembered that the above are the cases officially reported and due allowance should be made for errors and omissions—principally the latter.

Bob Burdette says: "Man that is married to a woman, is of many days and full of trouble. In the morning he draweth his salary and in the evening behold it is gone. It is a tale that is told. It vanisheth and no one knoweth whither it goeth. He riseth up, clothed in the chilly garments of night and seeketh somnambulent paregoric wherewith to soothe his infant posterity. He cometh forth as the horse or ox, and draweth the chariot of his offspring. He spendeth his shekels in the purchase of fine linen to cover the bosom of his family, yet himself is seen in the gates of the city with one suspender. Yea, he is altogether wretched."

ANTITOXINE SAID TO IMMUNE FOR NINETY-SIX DAYS.

Dr. John M. Maury, in the Memphis Lancet, reports having administered 500 units of diphtheria antitoxine to a child of twelve years that had been exposed to a case of diphtheria in the same family but did not develop the disease until the ninety-sixth day thereafter. The boy was then given 2,000 units, with rapid recovery.

SUBLIME FAITH.

A dermatologist began a paper on alopecia as follows: "Faith is usually pictured as a maiden clinging convulsively to the rock of ages. I think a more impressive representation would be that of a bald-headed patient rubbing vigorously into his scalp the remedy prescribed by the bald-headed specialist in skin-diseases."

SHORT BUT SWEET.

A doctor noted for his laconic style of expression sent the following terse and witty note to a refractory patient who paid no attention to reiterated demands for the payment of his bill: "Sir,—if you pay this bill you will oblige me. If you don't I shall oblige you."—N. Y. Lancet.

A German scientist has analyzed the human body into seven large nails, over six kilograms of candles, carbon to make sixty-five gross of lead pencils, phosphorus to make nearly a million matches, a large handful of salt and enough sugar to sweeten fifty cups of coffee. All the above would fit nicely into 1,200 egg shells. And the genius of the age is not yet exhausted.

A citizen of Minneapolis greatly amused the people on the street a few days ago by having a little pet pig which followed him around like a dog. This would remind one of Dr. Alexander Wood ("Lang Sandy Wood"), who treated Bobby Burns, the Scotch lyric composer, for a sprained knee, and had a pet sheep which followed him from place to place on his professional visits.

Eighteen trousers buttons, twenty-seven needles, several bits of nails and a buckle were swallowed by a German convict in the hopes of committing suicide, but failed, all the articles passing off in the usual way without inconvenience.

The new nurse, who had assisted the surgeon in a simple operation and had heard some of the common expressions used, said of the condition of another patient that he urinated by first intention, because he did not hesitate.

No foreign physician, who may be sojourning in Italy, will be permitted to give first aid in any street accident without laying himself liable to prosecution and fine. This is one of the queer laws of untutored Italy.

Adjutant-General Corbin has stated in his report that the following was the loss of life in the Spanish-American war from May 1, 1898, to February 28, 1899: Killed in action, 329; died of wounds, 125; died of disease, 5,277. Total, 5,731.

LOCKJAW.

Gelsemium has cured many cases of lockjaw when all other remedies have failed. It must be given in large doses, and pushed to the extreme point of toleration.—Med. Summary.

HIS METHOD.

"How do you pronounce the word 'butterine'?" asked the customer.

"The last syllable is silent," stiffly replied the tradesman.—What to Eat.

Index Medicus.

The following is a list of a few of the leading articles published in the June editions of some of the journals on our exchange list:

NEW YORK MED. JOUR., JUNE 10th.

President's Annual Address to the American Association, by Joseph M. Matthews, M. D.

Sanitary Lessons of the War, by George M. Sternberg, M. D., LL. D., U. S. A.

The Voice in Diagnosis, by Alexander J. C. Skene, M. D.

Vaginal Douches, Anti-partum and Post-partum, by N. Napoleon Boston, M. D.

Pneumonectomy, the Future Treatment of Incipient Tuberculosis, by John S. Pyle, M. D., LL. B.

Medical Gynaecology, by Eugene Coleman Savidge, M. D.

NEW YORK MED. JOUR., JUNE 17th.

Some Remarks upon Obstetrics in Private Practice, by J. Clifton Edgar, M. D.

Quantitative Determination of Albumin in the Urine, by Charles W. Purdy, M. D., LL. D.

A Severe Case of Puerperal Sepsis Treated by Antistreptococcus Serum and Uguentum Crede, by James D. Voorhees, A. M., M. D.

The Use of Holocaine as a Local Anaesthetic in Eye, Ear, Nose and Throat Operations, by John Gutmann, M. D.

On a Compound Microscope for Viewing the Eye, by Lucien Howe, M. D.

State of the Gastric Secretions in Organic Disease of the Heart, by Frank H. Murdock, M. D.

NEW YORK MED. JOUR., JUNE 24th.

Some Critical and Desultory Remarks on Recent Laryngological and Rhinological Literature, by Jonathan Wright, M. D. (Ninth paper.)

A Primary Polymorphous-cell Sarcoma of the Nose, with Universal Metastasis and Formation of a Free Sarcomatous Mass in the Right Ventricular Cavity, by Alfred Scott Warthin, M. D., Ph. D.

How to Give Anaesthetics, by William S. Deutsch, M. D.

The Inoculation Theory of Malaria, by Walter B. James, M. D.

Surgical Operations during Hypnotic Sleep, by Arthur MacDonald.

Rubber Gloves in Aseptic Abdominal Surgery, by C. H. Richardson, M. D.

MEDICAL RECORD, N. Y., JUNE 3d.

Some of the Problems of the Alienist, by Frederick Peterson, M. D.

Obscure Causes of Disease, by W. Stanton Gleason, M. D.

Rubeoliform and Other Eruptions, by Jacob Sobel, M. D.

Remarks on the Midwifery Question, by Thomas J. Hillis, M. D.

MEDICAL RECORD, N. Y., JUNE 10th.

Remarks on the Incision at the Outer Border of the Rectus for Appendicitis, by Frederick Kammerer, M. D.

Local Anaesthesia, by Alexander B. Johnson, M. D.

Diphtheritic Conjunctivitis Cured with Antitoxin, by George Huston Bell, M. D.

The Abortive Treatment of Gonorrheal Ophthalmia, by a Cantholysis and the Thorough Application of Nitrate of Silver, Forty Grains to the Ounce, by H. D. Jamison, M. D.

MEDICAL RECORD, N. Y., JUNE 17th.

Summer Complaints in Children, by Louis Fischer, M. D.

Reflections on the Nosology of the So-Called Functional Diseases, by Joseph Collins, M. D., and Joseph Fraenkel, M. D.

Traumatic Ruptures of the Heart, with a Case, by Richard Cole Newton, M. D.

Congenital Cataract in the Rabbit, by T. de Obarrio, M. D.

MEDICAL RECORD, N. Y., JUNE 24th.

Subacute Ataxic Paralysis and Combined Sclerosis, by Charles L. Dana, M. D.

Military Tuberculosis of the Pleura without Other Tuberculosis Involvement of the Lung, by Eugene Hodenpyl, M. D.

The Post-Febrile Insanities, by Allan McLane Hamilton, M. D.

Fibroma of the Abdominal Wall, by C. Jeff Miller, M. D.

PENN. MED. JOUR., PITTSBURG.

Four Addresses of Welcome before the Penn. Medical Society at Johnstown.

MERCK'S ARCHIVES, N. Y.

Ichthalbin in Pediatries, by Th. Homburger, M. D.

The Therapy of Urotropin, with a Report of Some Personal Experiences, by Herman Schiller, M. D.

A Contribution on the Therapeutic Action of Triphenin, by A. G. Servoss, M. D.

The Treatment of Acute Enterocolitis, by Robert C. Kenner, A. M., M. D.

Original Researches with the Salts of Strontium, by Leon L. Solomon, A. B., M. D.

MED. FORTNIGHTLY, ST. LOUIS.

Hysteria Resulting from Severe Fright, by Prof. F. X. Dercum, M. D.

Medical Inspection of School Children, by Frank Hinchey, M. D.

Treatment of Septic Conditions Following Labor, with the Injection of Anti-Streptococcic Serum, by A. G. Ellis, M. D.

DENTAL DIGEST, CHICAGO.

Conscientiousness in Our Daily Practice, by Dr. A. S. Sawyer.

Painless Extirpation of Live Pulps without Cataphoresis, by Dr. P. M. Williams.

SOUTH'N MED. JOUR., LA GRANGE, N. C.

Treatment of Urethral Stricture by Electrolysis, by Julius F. Lynch, M. D.

New Methods Employed for the Relief of Impaired Hearing, by Louis J. Lautenbach, M. D., Ph. D.

JOUR. OF MED. AND SCI., PORTLAND, ME.

Passing of the Provincial Surgeon, by Franklin C. Thayer, M. D.

Leucorrhoea and Its Treatment, by Rob't C. Kenner, M. D.

Development of Serum Therapy, by E. H. Judkins, M. D.

JOUR. OF MISS. MED. ASS'N. BILOXI.

A Study of Twelve Cases of Malarial Hematuria, Including Four Autopsies, by M. Goltman, M. D., and Wm. Kraus, M. D.

MED. AND SURG. MONITOR, INDIANAPOLIS.

Some Observations on Appendicitis, by E. I. Larkins, M. D.

The Universal Symbolism of Medicine, by R. French Stone, M. D.

Ophthalmia Neonatorum, by I. L. Firebaugh, M. D.

Perforations of the Hard and Soft Palate, by J. F. Barnhill, M. D.

Diphtheria, by N. A. Kremer, M. D.

Lateral Curvature of the Spine, by J. A. Comingor, M. D.

GAZETTE MEDICALE DE PARIS, 10 JUIN.

Chronique Médicale: La Médicine aux Salons de 1899. Les Epidemies manacantes: La Peste en Egypte. Les Banquets de la Semaine: Le Banquet du D Elmly.

THE POST-GRADUATE, N. Y.

Etiology and Treatment of Chorea, by Joseph Collins, M. D.

Use of Oxygen with Ether for Anaesthesia, by Carter S. Cole, M. D.

MARITIME MEDICAL NEWS, HALIFAX.

Tuberculin—Its Value as an Aid in the Early Diagnosis of Tuberculosis, by D. A. Campbell, M. D.

PAC. REC. OF MED. AND SURG., SAN FRAN.

A Contribution to the Study of Antral Disease, by J. Dennis Arnold, M. D.

A Case of Melano-Sarcoma of the Conjunctive; Death, by Geo. C. Pardee, Ph. B., A. M., M. D.

On Empyema of Sinus Frontalis, by F. Fehleisen, M. D.

Ocular Neurasthemia, by E. J. Overend, M. D.

Two New Instruments for Measuring the Monocular Field of Fixation, by F. B. Eaton, M. D.

Dietetics in Diseases Affecting Nutrition, by A J. Sanderson, M. D.

Hydatid Cysts, by Thos. G. Inman, M. D.

MEDICAL HERALD, ST. JOSEPH.

The Use of Force for the Reduction of Fractures of the Lower End of the Radius, by D. Richardson, M. D.

Mitral Regurgitation and Aortic Stenosis, by Wm. N. Beggs, A. B., M. D.

Chronic Nasal Catarrh, by P. I. Leonard, M. D.

Remarks on Neurasthenia, by John Punton, M. D.

INTERNAT'L MED. MAG., N. Y.

The Pathology of Gall-Stones, by Joseph McFarland, M. D.

Concerning Immunity and the Use of Normal Non-Immunized Serums, by W. Thornton Parker, M. D.

WIS. MED. RECORDER, JANESVILLE.

Brain-Tire, by James Mills, M. S., M. D.

Acute and Sudden Recurrent Appendicitis, by M. O. Terry, M. D.

Leucorrhoea, by Geo. S. Harnden, M. D.

Local Treatment for Gonorrhoea, by W. A. Crandall, M. D.

NORTHWESTERN LANCET, ST. PAUL, JUNE 1.

Pure Drinking Water, by Tomas Thams, M. D.

Gonorrhoea in Women, by W. H. Bordenstab, M. D.

Observations in Anaesthesia, by Alice Magaw.

What Are the Respective Indications for the Anterior Abdominal and Vaginal Incisions for Pelvic Disease, A. W. Abbott, M. D.

NORTHWESTERN LANCET, ST. PAUL, JUNE 15.

Hernia, by A. McLaren, M. D.

On Subdivision of the Uterus, by F. J. Campbell, Ph. M., M. D.

Some Abdominal Operations in Country Practice, by Thor Moeller, M. D.

General Melanosis, by R. O. Beard, M. D.

Alcohol, by Stuart Leech, M. D.

ST. PAUL MEDICAL JOURNAL.

Etiology of Abcess of the Liver, by Henry Jachson, M. D.

The Osteopathic Delusion, by Arthur Sweeney, M. D.

Differential Diagnosis between Dietl's Crisis and Gall-Stone Colic, by Charles L. Greene, M. D., and John T. Rogers, M. D.

Myomectomy for Myoms of the Uterus, by J. L. Rothrock, M. D.

Apparent Closure for the Eustachian Tubes, by B. M. Behrens, M. D.

VIRGINIA MED. SEMI-MONTHLY, JUNE 9.

Some Dropsies and Their Management, by J. C. Wilson, M. D.

Diagnosis of Bullet Wounds of the Intestines, by Hugh M. Taylor, M. D.

The Antiseptic and Eliminative Treatment of Typhoid Fever, by T. Virgil Hubbard, M. D.

Peritonitis from a Clinical Standpoint, by August Schachner, M. D.

Specific Urethritis, by John W. Shaw, M. D.

The Disinfection of Railway Coaches and Street Cars Operating in Ohio, by Frank Warner, M. D.

The Use of Chloroform in Labor, by Walker Bourne Gossett, M. D.

Abdominal Surgery—Past and Present, with Cases, by Franklin M. Brantley, M. D.

The Eye in General Disease, by J. Wilkinson Jervey, M. D.

Some Points in Operating for Abscess of the Liver, by B. E. Hadra, M. D.

The National Formulary, by M. D. Hoge, Jr., M. D.

VIRGINIA MED. SEMI-MONTHLY, JUNE 23.

A Case of Carcinoma of the Breast, by Elmer Sothoron, M. D.

The Prevention and Treatment of Pelvic Inflammation in the Female by the General Practitioner, by R. R. Kime, M. D.

Some Interesting Cases in Rectal Surgery, by A. B. Cooke, A. M., M. D.

Four Cases of Infantile Monstrosities in the Same Family, by William M. Hestle, M. D.

Lacerated Wound of the Eye with Displaced Retina—Preliminary Iridectomy in Incipient Cataract—Iridectomy for Atresiæ Pupillæ, by Dudley S. Reynolds, A. M., M. D.

The Continued Fevers of North Carolina, by Benjamin K. Hays, M. D.

Treatment of Epileptics in Colony, by J. P. Edgerly, M. D.

Treatment of General Suppurative Peritonitis, by Stuart McGuire, M. D.

Some Points in the Surgery of the Alimentary Canal, by Floyd Willcox McRae, M. D.

The Medical Aspects of Crime, by Daniel R. Brower, M. D.

Some Points in the Surgery of the Thumb, by Robert J. Reed, M. D.

The Materna—A New Device for the Home Modification of Milk, by Henry E. Tuley, A. B., M. D.

Treatment of Diabetes Mellitus, by J. M. Allen, A. M., M. D., LL. D.

Chronic Diarrhœa, by T. M. Greenwood, M. D.

NEW YORK LANCET.

The Perineum in First Labors, by J. W. Bullard, M. D.

A Clinical Contribution to the Treatment of Anaemia, by Geo. Taylor Stewart, M. D.

BUFFALO MEDICAL JOURNAL, BUFFALO.

Report of a Case of Acute Nephritis in an Infant—Probable Cause, Saccarin, by G. A. Himmelsbach, M. D.

Impressions of Cuba and the Cubans, by Marshall Clinton, M. D.

Hyperchlorydria, Including a Further Report on the Writer's Effervescence Test, by A. L. Benedict, M. D.

Use of Alcohol in the Treatment of Nervous and Mental Diseases, by Sydney A. Dunham, M. D.

GAILLARD'S MEDICAL JOURNAL, N. Y.

Proceedings of the American Medico-Psychological Association.

Puerperal Septicemia, by C. Prevost, M. D.

Recollections of a Quarter of a Century, by Stephen Smith Burt, M. A., M. D.

Specialism in Medicine., by A. C. Corr, M. D.

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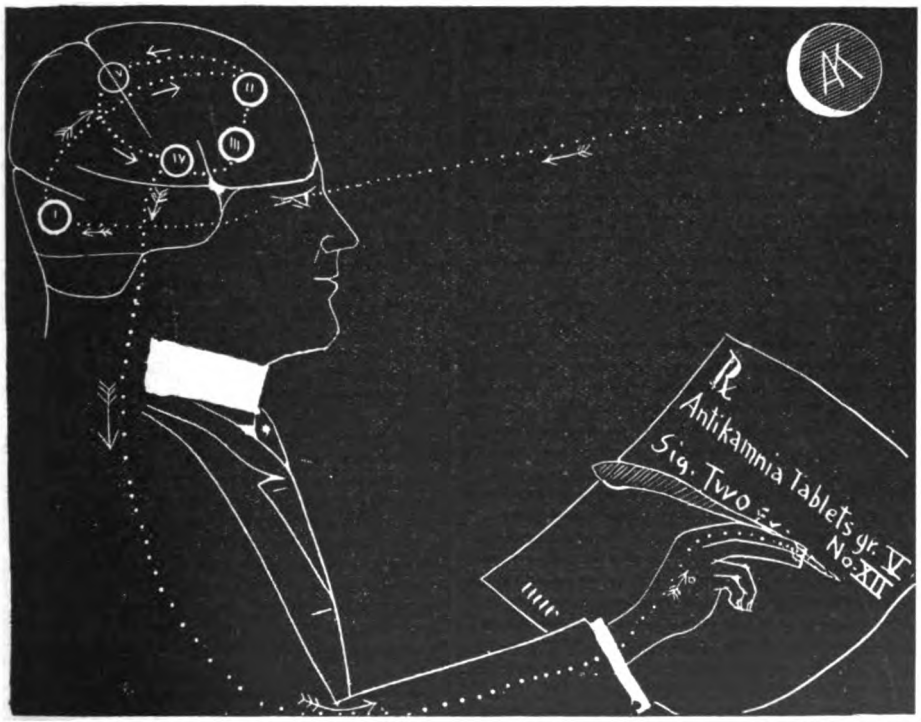

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V. Motor Center; transmits the impulse to write ANTIKAMNIA TABLETS.

PUBLISHER'S DEPARTMENT.

EXHIBIT AT THE THIRTY-FIRST ANNUAL MEETING OF THE MINNESOTA STATE MEDICAL SOCIETY, IN MINNEAPOLIS, JUNE 21 TO 23, 1899.

The exhibitors were hardly satisfied with the facilities at their disposal at the West Hotel, at which hostelry the State Society held its session this year, although the hotel management did all they could to make matters pleasant for them. It was a poor place to hold sessions of such a large body at best, for the simple reason that a hotel is never intended for such a purpose, and, besides, a national order made the same hotel their stopping place at the same time, and the modest physicians did not have elbow room when in the lobby. There were fewer exhibits than would have otherwise been made had there been room, and the largest one had to seek quarters in a vacant store opposite the hotel. The exhibitors were given one of the alcoves, usually used as a writing room, and some other space in the lobby. However, those who had displays made the best of the occasion, distributing samples and literature and exercising their persuasive powers on the visitors. The following is a somewhat abbreviated account of the several exhibits:

PARKE, DAVIS & CO., DETROIT.

Represented by Mr. C. A. Robinson, of Minneapolis, Assisted by Mr. E. G. Basset, Mr. H. E. Harter and Mr. Harry Hazeltine, Northwestern Travelers for the House.

It was impossible for the members of this firm to do justice to themselves by having their exhibit in the West hotel, consequently they secured a vacant store on the opposite side of Hennepin avenue and made the largest display while the society was in session. In one window they had several samples of sandalwood in its natural state, as well as bottles containing the oil extracted from the wood, and preparations from the drug, while in the other window were a number of guinea pigs, placed there simply to attract attention. Counters on either side displayed the numerous products placed on the market by this enterprising firm. A cage held three roosters which were used to show the possibilities of ergot in discoloring the combs.

To attempt to enumerate all the specialties of this well-known house here would be superfluous, but the representatives in charge of the exhibit took special pains to call attention to their septic vaccine which is pertinent to these small-pox times. Their vaccine is glycerinated and furnished in capillary tubes with rubber bulbs for ejecting the fluid, one tube being required for each vaccination. It is claimed for this vaccine that inoculation is followed by a larger percentage of successful vaccinations than with any other on the market; that it is physiologically tested to insure activity; that it is bacteriologically tested to secure entire absence of harmful micro-organisms, and that it is hermetically sealed.

Another equally important subject for work among the physicians was the calling attention to their serums, of which this house makes one of the largest varieties in the country. For instance, their anti-diphtheritic serum is supplied in bulbs containing 500, 1,000, 1,500 and 2,000 units each, ready for instant use. Then there is their anti-streptococcic serum, also in convenient bulbs, as well as their antitetanic serum. These serums are highly recommended as perfectly reliable, pure, and of full strength. Ergot aseptic is also supplied in the same form of bulb ready for use.

A neat booklet, showing the good results from the use of Taka-Diastase, one of their preparations, in indigestion and superdigestion, was handed out; also a reprint of an article by J. I. Dowling, M. D., of New York, on the "Nuclein Solution in the Treatment of Scrofula"; also a circular showing the usefulness of Syrup Trifolium Compound, and a complete catalogue of the firm's tablets,—any of which will gladly be mailed on postal card request to the address of the firm in Detroit.

D. APPLETON & COMPANY, NEW YORK CITY.

Represented by Mr. H. L. McCoy, 318 N. Y. Life Building, Minneapolis.

This house is too well known to need but a passing mention here, and their representative, Mr. H. L. McCoy, is also too well known in the northwest to require at our hands a biography, but it might perhaps be well to say something about both. Their mutual interests lie, of course, with the physicians, and while the former has a world-wide field that it covers in an eminently satisfactory manner, the latter has probably the best section of the country in which to devote his time in filling the wants of physicians who constantly need the latest results of medical research and practice in permanent book form.

Mr. McCoy does his work in a right royal manner, as was evidenced by the hearty hand-shake given him by many of the oldest practitioners of the state who were in attendance, and evidence came from several of the younger members of the profession, who said they were under a debt of gratitude to Mr. McCoy for courtesies extended to them on their graduation from the medical department. Under these circumstances there is no wonder that the house of D. Appleton & Company prospers in the northwestern states.

We are informed that Mr. McCoy has a complete stock of all the medical works of the company at his rooms in the New York Life Building, in this city, and books will be sent on telegraphic, telephonic or chirographic order without a moment's delay.

FAIRCHILD BROS. & FOSTER, NEW YORK CITY.

Represented by Mr. F. G. Aldworth, of Minneapolis.

This popular firm has been before the profession for many years with such valuable compounds that many physicians would find it inconvenient to practice without them. The firm's representative, Mr. Aldworth, successfully presented the claims of "Panopepton" and had a large supply of samples on hand, which were freely distributed to members of the society. Large claims are made for this preparation, which were presented in convincing form in a booklet giving clinical reports on the compound.

"Panopepton" combines "the prime food elements, albuminous and farinaceous, in a perfectly assimilable and agreeable solution. The beef and the bread, having been physiologically converted into the soluble and diffusible form absolutely essential to their appropriation by the system, are sterilized and concentrated and preserved in Sherry Wine."

Fairchild Bros. & Foster originated the idea of preparing such a nutrient food and, of course, have made a special study of the effects thereof and plenty of evidence that it will do just what they claim for it is adduced.

Their "Peptogenic Milk Powder" for modifying cows' milk was fully shown to visitors. It is claimed for this powder that it will convert cows' milk into a food for infants that is almost identical with human milk, which gives it an important place in the physician's medicine cabinet.

THE H. K. MULFORD CO., PHILADELPHIA.

Represented by Mr. Edwin V. Clark, Minneapolis.

If any citizen of Minneapolis or visitor at the hotel, whether a physician of layman, had but re-

quested, he could have been inoculated with almost any contagious disease he might select, from diphtheria to Asiatic cholera, for the above firm had the germs of each in tubes properly labeled and corked. Should one wish to see how each miscrobe looked under the microscope he had but to look at the delicate reproductions from the micro-photographs, which were also in display. It so happened that no one requested to be inoculated, but there were many who examined the photographs and wondered how the little mischief-makers could do such awful damage to the human body, or to any other animal structure.

There was also a fine display of antitoxines for the physician's use as well as for the veterinary surgeon.

Their glycerinated vaccine lymph, of which samples were at hand, attracted much attention.

Other specialties were Granular Effervescent Salicylos, Soluble Effervescent Tablets Lithos, Capsules Terebene and Sandal Comp., Bismuth Formic-Iodide Comp., Glycerite of Ichthyol and Iodine Comp., Elixir Hydrangea and Lithium Comp., Capsules Methylene-Blue Comp. and Wild Cherry and Morrhualine Cordial.

Mr. Clark was cordially greeted by numerous friends among the profession.

THE YAWMAN & ERBE MANUFACTURING CO., SUCCESSORS TO THE OFFICE SPECIALTY CO., ROCHESTER, N. Y.

Represented by Mr. Charles F. Meyer, of St. Paul.

This house is one of the largest in the country in its line of business, manufacturing as it does many novel devices for the office, including letter files, bill files and indexes. One of the most convenient of these for the physician, who cares at all for method, in his work, is the index file, where may be kept for instant reference, a literary index, or an index of cases, giving history and progress and line of treatment for each individual who may come under his care. We have in mind a physician in this city who keeps a double index of cases in such a way that he can, in five seconds, look up the whole line of treatment of any case he has, whether under his attention for only a few weeks or for several years, and his cabinet and filing boxes are home-made and probably cost him more than the cabinets made by the above house, while they are not anywhere near so elegant or so compact. A letter addressed to the house or to the representative will secure a complete catalogue from which selections may be made. Mr. Meyer was in evidence with samples and we are informed secured several good orders.

WM. H. ARMSTRONG & CO., INDIANAPOLIS.

Represented by Mr. A. C. Dice, District Manager, Minneapolis.

This house, one of the best-known in the west, and one of the largest in the country, manufactures a complete line of surgical instruments, deformity apparatus, trusses, crutches and elastic hosiery. In the line of instruments Mr. Dice had one of the most complete outfits on the floor, and considerable interest was manifested in the examination of the several articles in the display. Several good orders were booked.

THE MALTINE CO., BROOKLYN, NEW YORK.

Represented by Dr. Ward R. Ford, of Minneapolis.

This company, one of the largest in the country, has but recently placed a new compound on the market—"Maltine with Creosote"—which seems to be meeting the requirements for a combination of the latter drug with something that would completely disguise its disagreeable taste, and at the same time remove the tendency of creosote to produce gastric irritation. Thorough and satisfactory tests have been made with the compound, and the results so far have been eminently satisfactory to numerous distinguished practitioners in the East. For the various forms of tuberculosis it is highly recommended. A very large number of samples were given away, together with the other and better known preparations. And in addition to the above a very pretty desk pad for blotting paper with "Maltine" advertising upon it was presented to nearly every physician. Dr. Ford was highly pleased with the reception given the samples and souvenirs, and any outsider who might witness the proceedings for a few minutes could observe that the gentleman's personality was a large factor in the pleasure of the professional gentlemen who carried to their homes the neat bundles presented to them.

W. D. ALLISON CO., INDIANAPOLIS.

Represented by Mr. A. C. Dice, District Manager, Minneapolis, 816 Dayton Building.

Indianapolis is the center where a large number of articles are manufactured in all trades, but there is probably no article that comes from that city, in any line, that gives more satisfaction to the users than the physicians' table, made by the W. D. Allison Co. It is so simple in construction, so easy to manipulate, so convenient and practical, that it commends itself to the surgeon at a glance. This table is built in such a way that the body of the patient may be readily placed in any of the technically-named positions, when the fastenings effectually lock, and there are no vibrations.

The Allison combination cabinet, made by the same parties, is also enthusiastically received by the profession. It is aseptic and dust proof and will hold all the instruments and medicine in bottles that any physician, with the largest practice, may need in his daily work.

The same firm also makes an instrument cabinet which is neat and artistic in appearance and is convenient and practical.

All of the good points of the above were shown in a persuasive and effective manner by Mr. Dice, and the missionary work done by him will no doubt result in many sales in the future.

CHAS. H. CIRKLER, MINNEAPOLIS.

Represented by Mr. J. B. Murphy, of Minneapolis.

Mr. Cirkler, the popular druggist and chemist, located in the Dayton building, this city, has well-nigh turned his place of business into a physicians' and hospital supply house, and is now holding the field in Minneapolis in this line of trade, and his only handicap is room to do his increasing business, which, however, we understand will be promptly overcome when the necessity becomes too urgent. He had an elegant display on the floor, under the charge of Mr. Murphy, of this city, who booked numerous orders for immediate and future delivery. There was a full line of surgical instruments, and physicians' and hospital supplies on exhibition, among them a couple of electric batteries which attracted attention and were tested by the visitors, creating amusement for the other exhibitors. Complete catalogues of instrument cases were given out as well as of the other goods handled by Mr. Cirkler. Parties living in the northwestern states will find it convenient to send their orders direct to this house and receive prompt service and the best goods made in the country.

THE OAKLAND CHEMICAL CO., NEW YORK CITY.

Represented by Mr. H. N. Timolat, of Minneapolis.

"The Kind that Keeps," is the motto for the principal product of the above house, referring to their Oakland Hydrogen Dioxide. This compound is one of the best known antiseptics and germicides on the

market for internal and external use, and it is claimed for it that it is one of the best for the treatment of diphtheria, scarlet fever and other contagious diseases. The strongest point in its favor, aside from its effectiveness, is its harmlessness, for it may be used with lavishness or in small quantities and there need be no fear that harm will result. It may be used with confidence wherever an antiseptic is needed. Truly this is the age of antiseptics and warfare against the mysterious microbe, and it is very evident that Oakland Hydrogen Dioxide is one of the strongest weapons against that foe of mankind. Mr. Timolat was busy giving out samples and monograms on the compound.

For the administration of oxygen gas the above company has placed on the market a very convenient form of inhaling bottle, which is cheap and its utility is quite apparent when once it is tried.

THE NEW YORK PHARMACAL ASSOCIATION, THE ARLINGTON CHEMICAL COMPANY, THE PALISADE MANUFACTURING CO., YONKERS, NEW YORK.

Represented by E. R. Tarry, M. D., of Virginia.

The above three establishments are one and the same, and have the same management, the same factory and the same general office. They had a conspicuous location for their exhibit, under the charge of Dr. Tarry, who distributed samples of Lectopeptine preparations, Liquid Peptonoids, Borolyptol, Kola Cardinette and Hemaboloids, together with literature fully describing each compound in detail. All these preparations are meeting with favor, and from talks with several physicians we were informed that they were deserving of a still greater reputation in the profession.

NOYES BROS. & CUTLER, ST. PAUL.

Represented by Mr. William O. Wilson, of St. Paul.

This well-known house had one of the largest displays on the floor, consisting of surgical instruments and appliances of all kinds.

Mr. Wilson, the genial representative, is an expert in the exhibition work, and made an impression upon the physicians who took the pains to examine the goods on disply.

THE PHYSICIANS' AND SURGEONS' ASSOCIATION.

Among the new and promising enterprises in Minneapolis is the Physicians' and Surgeons' Association, with offices at 410, 412 and 414 Temple Court.

The object of the Association is to furnish information to its members concerning the standing of individuals, or promptness or tardiness with which they meet their obligations to the profession; making collections of outstanding accounts, etc., etc.

The management of the Association is with Mr. H. M. Stocking and C. L. Wright, both of whom are gentlemen of successful experience in their line. Business entrusted to their care will receive careful and prompt attention. Although beginning less than a year since, they have already made a record for success and promptness which commends them to the profession, and any who are not yet members of the Association, would do well to confer with them.

Dr. L. Lewis, Lewis Sanitorium, Auburn, N. Y., reports: I had a Mrs. R. upon Hagee's Cordial, and she improved every day. Her weight when she began was 101 pounds, and is now 145 pounds, after eight months' use of the Cordial. She had night sweats, hectic cough, diarrhœa, and all the regular symptoms which are connected with Phthisis.

It is seldom that you will find genuine scientific advertising pages, yet if you will turn another page, occupied by the McArthur Hypophosphite Co., of Ansonia, Conn., you will find it there of a very instructing and interesting character.

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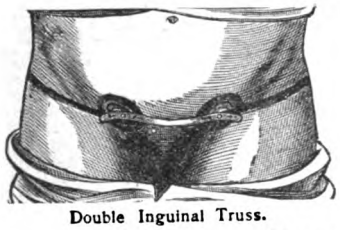

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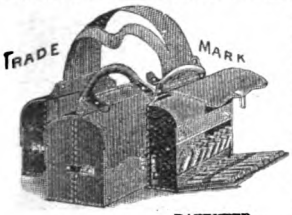

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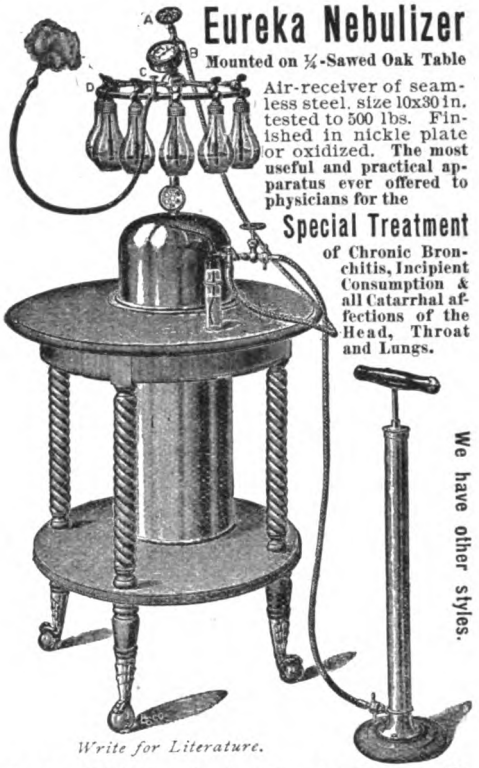

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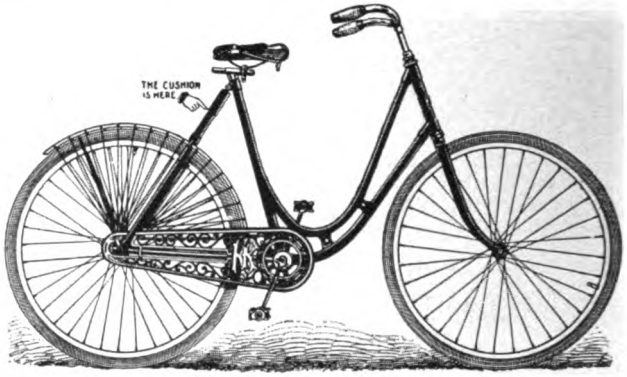
of the jolts and jars and shocks received in riding the ordinary bicycles, with rigid frames.

They also know (who have tried them) the luxury of riding a Cushion frame,



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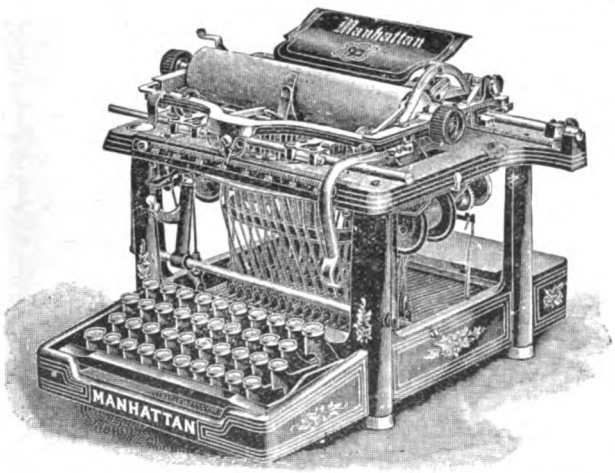

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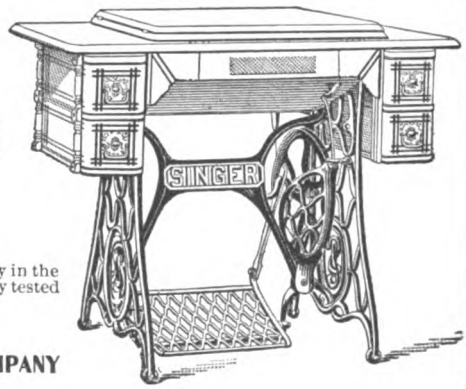

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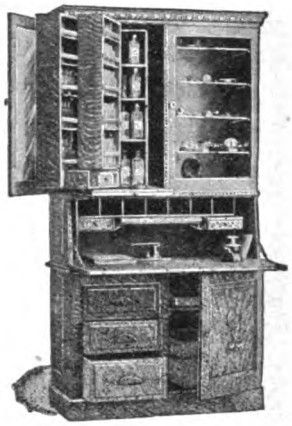

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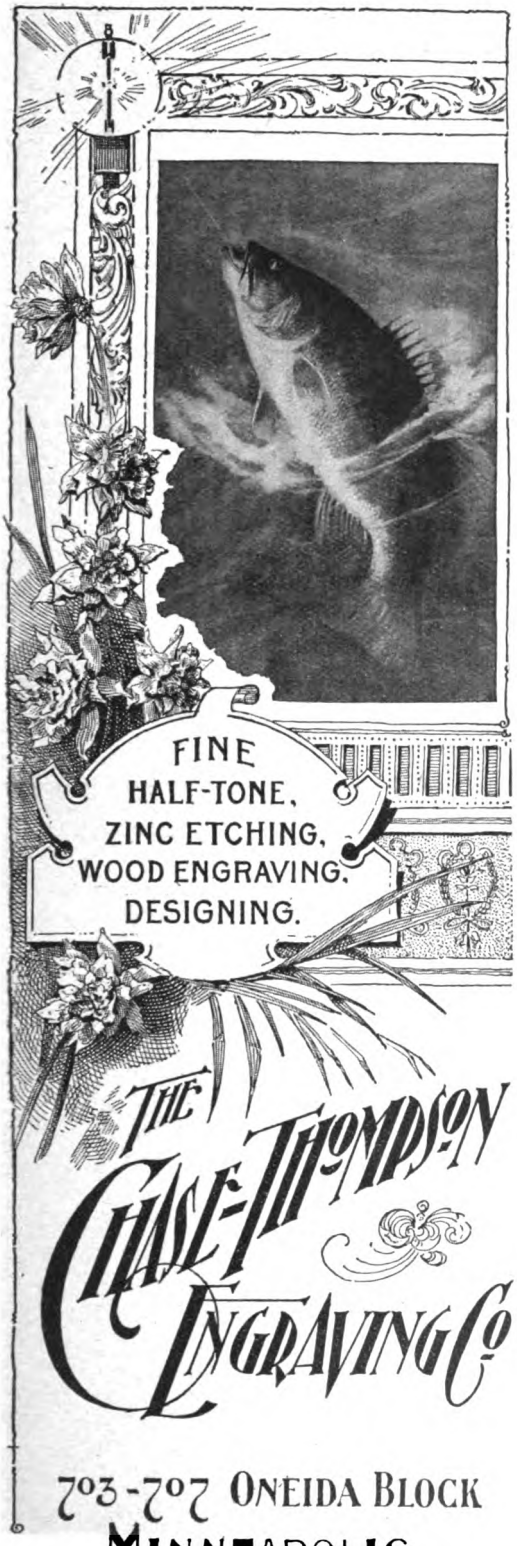

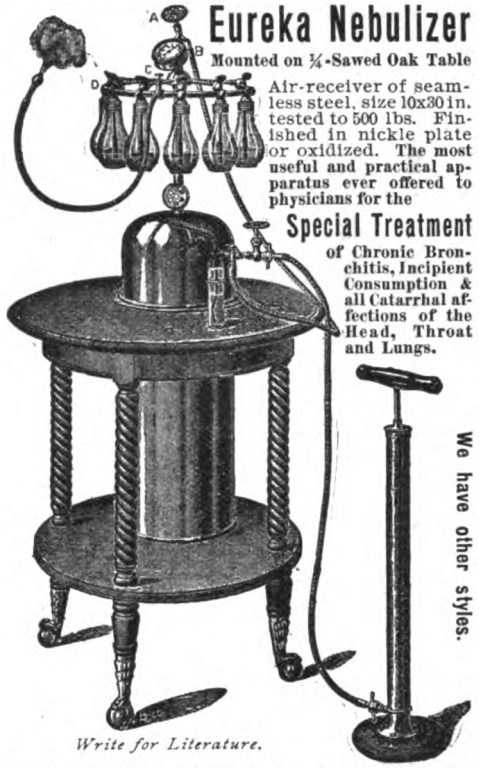

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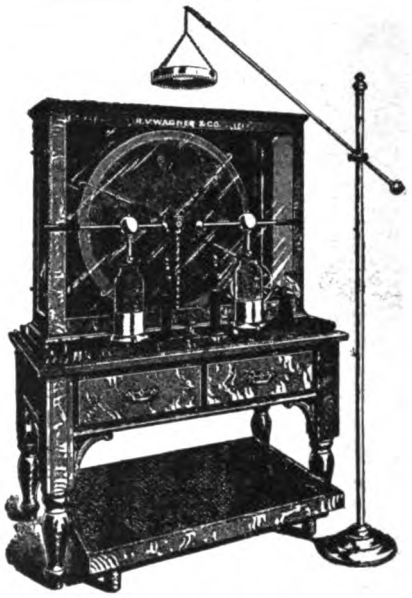

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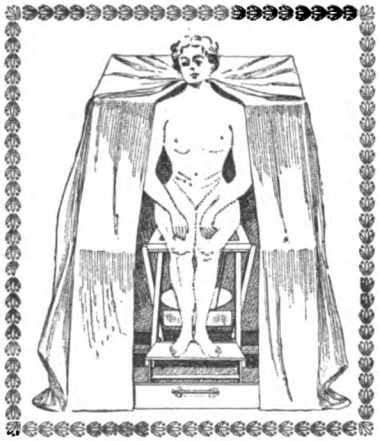

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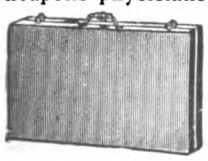

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THE MEDICAL DIAL

A Monthly Record of Medicine and Surgery.

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Original Articles.

*SURGICAL TREATMENT OF THE URETHRA IN OLD MEN.

By D. R. GREENLEE, M. D.,

Surgeon Minnesotn Soldiers Home, Minneapolis.

Without attempting to present a scientific discussion of the geneto-urinary organs of the male, I desire to report one hundred cases of aged men, who have suffered from the various diseases common to men of advanced years, and that is difficult micturition, which is a great affliction, and causes directly or indirectly more suffering than is usually supposed, and which is too often overlooked, unless absolute retention exists.

Having had a great many men of this class to care for, it seemed necessary to resort to more radical treatment than mere palliative remedies; therefore all medical treatment was abandoned and stretching the urethra was commenced, which resulted in marked benefit, and most of the cases were permanently cured; of course stricture is the most common cause of obstruction, and many of these cases are extremely difficult to overcome, especially a severe stricture in the prostatic portion which is accompanied with hypertrophy of the prostate gland; fortunately however the cases are few which cannot be overcome by the skillful use of the sounds. As yet there have been no definite conclusions arrived at as to the causes by which this change—hypertrophy of the gland—is brought about. It is a well known fact however that hypertrophy takes place after the age of fifty years and can not hardly be considered a pathological condition, as it may exist without any symptom whatever except as it may interfere with the flow of urine. It seems to be an overgrowth caused by a decline of the generative function; but we find another condition of the gland, that of congestion and inflammation, with a catarrhal condition of the urethra, and the ducts emptying into the region of the prostate; there is evidently a stasis in the blood circulation of this region.

It is well known that it is upon nerve force alone that the circulation depends for its activity, hence a proper supply of nerve force means a good circulation; a waste of nerve force or a low tone of the nervous system means an unfeebled condition with its various forms of unfortunate sequences.

The latter condition is frequently found in the aged, although the apparently robust are not exempt from a stasis of circulation in the urinary tract. Whatever wastes sexual power causes a waste of sympathetic nervous power, and therefore lowers the nervous tone of the whole sympathetic system.

The various forms of neurosthenia may be traced to the irritation of the rectum or sexual system, or both. The practice of correcting reflex irritations and congestions, and instituting general nutritive changes throughout the body by the treatment of the two great excretory outlets of the human body, invites a great deal of study and investigation.

It has been now about ten months since the dilating treatment by the use of graded sounds has been instituted at the Soldiers' Home, which has resulted in giving great relief, and, as I have said before, made many permanent cures. The history of these one hundred cases cannot be correctly reported; a long-forgotten gonorrhea is undoubtedly the cause of trouble with many who deny any possibility of such an occurrence; others admit promptly that such is the case. Duplay speaks of an idiopathic contracture of the urethra in the prostate and membranous portion which does not depend on any disease of the urinary organs. I suppose he means any specific disease. It matters little, however, what the direct cause is, the treatment must be the same. The pathological conditions as found in these cases varies very much as well as the degree of severity. In the treatment of these cases no general anesthetic was used; although many cases could have been dilated at once under anesthesia, the severe strictures with firm cicatricial tissue can not be forced without incurring a good deal of danger, whereas the slower process softens the made tissue and excites absorbsion

*Read before the Minnesota State Medical Society.

after the first few efforts of dilatation. In cases of hyperasthesia of the canal a four per cent. solution of cacaine or a five per cent. eucaine renders good service. The technique of this minor surgical procedure is of as much importance as those of greater magnitude; hence a strict aseptic condition was observed in all cases.

I will give the details of two cases which will explain the technique as we go along.

J. G. P., age 72, admitted from a country town on October 22, 1898, with the following symptoms: Constant dribbling of urine; clothes wet to feet; œdema of lower extremities; quite anemic; loss of appetite; constipation and pain in region of bladder, prostate gland and inside of thighs.

TREATMENT.

Patient was bathed and put to bed with dry clothes, and given a urinal to catch the urine; enough of this was obtained for a test, which was found to contain about twenty per cent. albumen. The next step was to learn the cause of retention of urine. The glands penis was thoroughly cleaned with chloride wash, and a sterilized Fowler's sound smeared with soap-suds passed into the urethra; a moderate anterior stricture was discovered, which, by the use of eucaine, was dilated at once. It was then discovered that an almost impervious stricture existed in the prostatic region, and now came the tug of war, requiring patience, perseverance and a little skill. The smallest bougie and sounds were finally passed, which resulted in an increased flow of urine. This dilating process was repeated every day until a number twelve American gauge was passed; after which the intervals were of longer duration, three or four days usually, until a number twenty American gauge passed freely without any resistance. Numbers eighteen, nineteen, and twenty were passed occasionally for three months, and in the mean time the urethra was washed out with warm boracic acid solution through Durham's back-flow tube, followed by an injection through a soft rubber catheter into the prostatic region of a one to two per cent. solution of protargol. This man improved rapidly; albumen and œdema of extremities disappeared, prostate gland grew less in size and tenderness; no medicines were used except a general tonic including iron.

Case No. 2.—C. B., age 57; subject of epilepsy; body not well nourished, although he had a ravenous appetite. He complained of too frequent micturition, especially at night, and sometimes wetting the bed. Convulsions almost every night and sometimes during the day. Examination revealed phimosis with extremely long prepuce and hardened orifice, unable to expose meatus urinarious; prostate gland enlarged and tender. Circumcision was performed at once under the local effect of eucaine injected under the skin of the parts to be removed, giving very little pain or inconvenience to the patient. One week later the sounds were used; a considerable constricture was found in the prostatic inch, but no difficulty in passing a number twelve A. G., although quite tender, and when sound was withdrawn a good deal of stringy mucous was adherent to the instrument; this was repeated several times to remove the mucous, after which a thorough washout in the same manner as in case No. 1. The patient improved rapidly by further stretching of the urethra every few days. The convulsions became very light and less frequent; he is still under the treatment with a fair prospect of complete recovery.

These two cases are a sample of about fifty per cent. of all patients treated in this manner, and the balance of less severity, but all in the same line of trouble.

It is not the object of this paper to attempt to instruct experienced surgeons how to manage these cases, but simply to show what a persistent treatment will do by the use of the sounds alone; also, that the treatment does more than relieve the impediment to the flow of urine; it relieves many reflex troubles which add much to the relief of a man in his declining years.

It is not a difficult matter for a student to learn the anatomy of the urethra, and its relations in a normal condition, or to pass a catheter when there has been no pathological changes; but when he meets with a severe stricture, or an enlarged prostate pressing sharply upon the canal, he finds himself in difficulty of the most perplexing kind, requiring great patience and perseverance. It may not be out of place here to suggest to the young practitioner not to rely too much upon his patient's statements, as it is very common for them to say their kidneys are affected, or there is something wrong with the bladder. Nine times out of ten the cause of trouble is between the meatus and the bladder.

In referring back to the treatment of hypertrophy of the prostate gland, I wish to add my experience and observation of three cases of castration; two of them were performed a number of years ago without much relief, which I now believe had more or less of an inflammatory action of the urethra as a complication of the enlarged gland. The third case was performed on the 17th day of August, 1895, the record of which I have kept. J. R., age 64, lost the left testicle when a small boy by an accident which required the removal of the gland. He was admitted to the hospital for treatment of difficult micturition; a silver catheter could not be passed, owing to a lateral curvature of the urethra. A soft rubber was passed and drew off the urine in considerable quantity. Examination through the rec-

tum revealed an extensive hypertrophy of the prostate gland on the right side, but the left side gland was quite small, the side from which the testicle had been removed in early life. I explained his condition to him and suggested the removal of the remaining testicle, to which he promptly consented, and it was removed on the day above mentioned. There was nothing unusual about the operation, except the cord was secured by passing the two ends of the cat-gut ligature through the upper end of the wound forming the first stitch. The wound healed kindly in a few days; the prostate diminished in size and in two weeks he could pass his urine at will.

The above case was unique in many respects, and the only one claiming favorable results known to the writer, although the author, Dr. J. D. White, of Philadelphia, claims many cures of the malady by means of castration. The high estimated value of those organs has probably prevented any very extensive experience in that line of treatment.

CERTAIN LANDMARKS IN THE PROGRESS OF MODERN MEDICINE.

By Franklin Staples, M. D., Winona, Minn.

Chairman Minn. State Board of Health.

The value of departures and developments in the arts and sciences is best estimated when seen in the retrospect. The abundance and newness of what is near may render discriminating observation difficult. As recently said by Osler:[1] "In the case of medicine the difficulties of observation are enormously increased by the extraordinary development which belongs to the history of the present century." This author further expresses his estimate of the advance of modern medicine in words as follows: "The rate of progress has been too rapid for us to appreciate, and we stand bewildered, and, as it were, in a state of intellectual giddiness, when we attempt to obtain a broad, comprehensive view of the subject."

In reviewing the broad field of medicine and surgery, with the history of events for half a century or more, many important beginnings are counted; some of which, in their results and greater development, are now seen to be not only the essential ground-work, but important elements in the science structure and in the practical advances of the present time. The following are examples:

[1]Address in medicine delivered before the British Medical Association at Montreal.

I. ANÆSTHESIA—(AFTER FIFTY YEARS.)

Shortly before the middle of the present century the discovery of anæsthesia marked an epoch in the history of operative surgery. Of this, as now seen, it is believed that at the time of its advent no more important or beneficient discovery had been made. The use of sulphuric ether and chloroform, as the principal anæsthetic agents, soon became universal, and have so continued with constantly increasing advantage and importance to the present time.

A word of practical bearing may be allowed here. An element in the increasing success in the use of these anæsthetics has been the acquired purity of the drugs. This has been demanded by surgeons, and has been realized more fully in late years than in former times.

Some knowledge of the drug, and practical skill in administering the different anæsthetics are essential to the better success in their use. To illustrate: Sulphuric ether is a light liquid, evaporates rapidly in ordinary room temperatures, mingles readily with the air, and, being of less specific gravity, quickly rises in the atmosphere when allowed to evaporate. Chloroform, on the other hand, is heavy, both in liquid and vapor form, mingles slowly with the air, and when the vapor is set free it falls to the floor in a stream almost like a liquid. It necessarily follows that the two anæsthetics must be administered in different ways. In the use of ether the air should be excluded from the inhaler as far as possible. With the best efforts in this direction, with ordinary means of inhalation, the vapor will hardly fail to be sufficiently diluted with the air, and have a sufficient proportion of its elements to support respiration. The opposite conditions are found in chloroform, and a different procedure in regard to the admission of air is required. Moreover, for reasons apparent, an attempt at a mixture of the two anæsthetics for inhalation is by no means admissible.

Concerning the advantage of anæsthesia in surgery, it is not alone, nor is it, perhaps of chief importance, that by its use the patient is saved from suffering during an operation, but the greater good may be found in the fact, that there may not only be a better technique and more complete execution in all operations, but by these very means, far better results may be realized, not only in saving life, but in restoring to usefulness and comfort parts that would otherwise be lost or made subject to disease, disuse and suffering. The highest excellence in surgical operation is no longer rapidity of execution; but carefulness, exactness, and intelligent direction in every movement have now become possible, and are of first importance. Operations and explora-

tions, not before practicable, are now made common procedures, both for diagnosis and for restorative treatment. Besides, it is now well known that the danger to life from surgical shock, or rather that the chances of the existence of shock, either from injury or capital operation, are far less when the nerve centers are protected by well directed anæsthesia. Moreover, the same holds good in certain medical cases: for instance, in puerperal eclampsia, in which life may terminate in reflex convulsions. The advantage of anæsthesia in this case is, that by it the susceptibility of the reflex centers is held in abeyance during the time of the irritative, septic influence.

This brief mention is not an enumeration, but may be taken as in part illustrative or suggestive of the great advantages gained by the discovery and application of anæsthesia in practical medicine and surgery.

II. THE DEVELOPMENT OF STATE MEDICINE.

Public Hygiene—State Preventive Medicine—Authoritative Sanitation for the prevention of disease, has developed principally during the time of the present generation. It began in England in 1844, when the House of Commons became sufficiently interested to take the initiatory step in the movement which has developed into what at present appears as the world's great system of State Preventive Medicine. In the United States the first movement was made in the Legislature of the State of Massachusetts in 1849, but it was twenty years later when the first State Board of Health was formed in this state, and the work of sanitation by governmental authority began in this country. From these beginnings at times within the observation of men now active in affairs, the wonderful development and extension of State Preventive Medicine in the principal countries of the world have taken place. What appears as the most significant and important fact in the existence and present magnitude of this department of science and law, is that it has resulted largely from the advance of education and practical knowledge and interest in this direction in the popular mind.

Further accounts of this departure and growth may not now be given: the purpose here is to notice briefly some of the ways in which the development of state medicine, in its different departments, has aided in the advancement of general medicine and science.

In our centennial year, 1876, the eminent physician and first president of the Massachusetts State Board of Health, Dr. Henry I. Bowditch, in his memorable address before the International Medical Congress at Philadelphia, spoke concerning the progress of medicine in the then past centennial period as follows: "In its medical and social ideas, the past century easily divides itself into three unequal epochs, viz.: I. From 1776 to 1832, the era of theory and of dogmatism; II. 1832 to 1869, or that of strict observation, and of bold, often reckless, scepticism; III. From 1869 to 1876, which is destined to continue and progress while the nation itself lives, the noblest and most beneficent of all, viz., that in which the profession joined heartily with the laity and, aided by the material and intellectual resources of great states, will study to unravel the primal causes of all disease with the object of preventing it. It is the epoch of State Preventive Medicine." The broad view of this distinguished medical scientist and sanitarian, here expressed, as now seen in the retrospect after nearly a quarter of a century, was correctly prophetic of what in the higher science of medicine was then to come. The present outlook shows the fulfillment of this prediction in various ways. Among the more important advantages which have resulted from the advance of state medicine have been its effects in elevating the standard of medical education in the country. The position and work, first of the Illinois State Board of Health, then of other states by their examining boards, in fixing a lawful standard of requirements for admission to the practice of medicine in the states, have given character and position to the profession and to medical practice in this country, which under the previous regime could not be realized.

III. THE ADVENT OF BACTERIOLOGY.

The most recent advances in medicine and surgery which have resulted from discoveries in bacteriology and the practical measures which have come from the same, have been the work of many minds in different countries, principally in the last quarter of a century. The results of work in this direction were especially in the mind of Professor Osler, when he spoke to the British Association on the wonderful progress of medicine in recent times. While the burden of his message was the value of English culture in the history of medicine, all nationalities received their share of credit, and a general account of great achievements and suggestions concerning the distribution of prizes found expression in the following words: "Three among the greatest scientific movements of the century have come from Germany and France. Bichat, Laennec, and Louis laid the foundation of modern clinical medicine; Virchow and his pupils, of scientific pathology; while Pasteur and Koch have revolutionized the study of the causes of disease; and yet the modern history of the art of medicine could almost be written to its fulness from the records of the Anglo-Saxon race. We can claim every practical advance of the very first rank—vaccination, anæsthesia, preventive

medicine, and antiseptic surgery, the 'captain jewels in the carcanet' of the profession, besides which can be placed no others of equal lustre."

Since the days of ancient Greek medicine, it has been the aim of the higher order of scientists to establish practical medicine upon a pathologic basis. Progress in this direction, however, was greatly impeded during the dark and middle ages and far into the modern period by the growth of false theories in medicine—pseudo-pathies, and medical delusions, the wasting remains of some of which have continued to the present time. It now may be safely said that nothing in all time has developed in the world of true science that compares in importance with what has lately come to light in the domain of bacteriology. As is now understood, it lies at the bottom of pathologic anatomy, and explains much of the phenomena in disease action which could formerly be but partially understood. It has advanced the science of medicine by showing the nature of causes, the existing living substances, which, by their presence and action in the tissues, constitute the pathological conditions of the same; and by affording direction for management, based upon a knowledge of the nature and action of germ destroying agents obtained by experimental work in laboratories and by clinical observation. This is an advance over former methods of study, in that investigation is made by the use of instruments of precision, chemical and biological tests, the use of the microscope, thermometer, etc., rather than by superficial observation of supposed symptoms of disease, with little understanding of their significance and value. The former may be regarded as demonstrative, while the latter may result in misleading conjecture.

The practical relations of newly discovered facts in bacteriology to medicine and surgery, bearing upon the progress of the same, may be mentioned in part as follows: First, on medical education:—Changes in methods and scope of study and teaching, which of late have come to our advanced institutions, have resulted in the increase and improvement of laboratories for experimental and clinical work and demonstration. The pathological laboratory is now a necessary department, and has a large place in all advanced schools of medicine. Its effect has been to extend the course, widen the scope, and to elevate the standard of medical instruction. Besides, the time is now, when to the physician thus educated, who is engaged in the practice of medicine or surgery, or both, comes the necessity of having his own private laboratory, suitably furnished with instruments and apparatus for use in diagnosis and for study and demonstration in pathology. It is known that the microscope has recently been promoted from its old position of office ornament, and assigned to active duty in a new and important department.

In the matter of present place and importance of the science of bacteriology, the words of Professor Abbott of the University of Pennsylvania may be quoted. He says: "From the very onset its history is inseparably connected with that of medicine; and as it now stands, its relation to hygiene and preventive medicine are of the utmost importance. It is, indeed, to a more intimate acquaintance with the biological activities of the unicellular, vegetable micro-organisms, that modern hygiene owes much of its value, and our knowledge of infectious diseases has reached the position it now occupies." [1]

The great advantage of a practical knowledge of the character of contagious diseases, depending as it does upon the behavior of different infections, the variety of methods of communication, length of incubation, and of how the action of specific germs may be aborted, modified, or prevented, is shown in the present more intelligent and more successful management both for prevention and for cure. The different means and methods of preventing the passing of infection, for instance, in cases of typhoid fever, tuberculosis or diphtheria will serve to illustrate.

With the present higher education demanded for practicing physicians, and the deeper insight into disease conditions now available, the far greater possibilities for good resulting from improved management, become apparent. With the advance of knowledge comes increased responsibility. It is to the credit of advanced law and order in the civilized world, that at the end of the nineteenth century men are held responsible for what they ought to know.—Journal of Medicine and Science, Portland, Maine, July, 1899.

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[1] Principles of Bacteriology (Introduction), Abbott.

THE COLD PLUNGE.

Dr. Hobart Emery Hare, Professor of Therapeutics, Jefferson Medical College, Philadelphia (American Medical Quarterly for June), says:

"During the past three months I have had 64 cases of typhoid fever under my care. Every one of these has required hydrotherapy; in only two has the persistency of the fever necessitated the use of the cold plunge.

"In the opinion of those who have the largest experience, hydrotherapy is needed in every case of typhoid, and with this view I most heartily concur.

"When it comes to the question of dosage (in hydrotherapy) my point of view differs from that of some others.

"As firmly as I believe that the cold plunge

is not for every one, so do I believe that in some cases it is the best and only thing which can be employed with advantage.

"I believe that the mode of applying cold should be varied to the needs of the individual patient, and I have yet to see the case in which I have regretted the employment of the modified plunge bath.

"What, then, are the modifications that I would suggest? First, the use of cold applied to the body of the patient who is stripped and who lies upon his bed, while the nurse gives him the necessary friction and massage.

"It is of vital importance that the nurse who employs this modified bath treatment should be trained to his duties.

"I am firmly of the belief that the active rubbing which accompanies the use of cold in the way that I have described, is of great advantage to the patient, because I believe that a gentle massage given to patients suffering from typhoid fever and who are practically taking the rest cure, is an exceedingly useful thing for the maintenance of health. Second, because by these frictions we increase reaction; and third, as has been proved by Popischil, friction increases the loss of heat 80 per cent., and, according to Weisroch, the loss of moisture through the skin 50 per cent.

"Whenever a physician tells me that he is unable to lower the temperature by friction and cold without the plunge, I am confident that it is because the method has not been properly employed, for only rarely is the fever so persistent as to fail to drop.

"Of course in the early stages of typhoid it is a well known fact that the fever is peculiarly resistant, not only to cold friction but also to the plunge itself."

PRACTICAL MIND HEALING.

A Christian Scientist, whose time was fully occupied in thinking about the unreality of diseases at $2 per think, once treated a highly unappreciative man for a chronic nervous affection of a very painful character. After this man had depleted his purse by sending $40 thus without any improvement, he desired to know when he should begin to get better. Then the Christian Scientist waxed wroth and said: "O you of little faith! Know that you would already have been cured, if you had believed me when I told you that your pain was not real. Pain and suffering do not exist; they are merely phantasms of the brain. There is no such thing as matter," continued he with such emphasis that he rattled some silver dollars in his pocket, "none whatever; the only real thing is thought. All this is too subtile for your commonplace mind, and hence I can do nothing for you; you had better go and fill your coarse, unappreciative system with drugs."

Then a vision of $40 that had vanished, and of pain that had vanished not, came before the mind of that long suffering man, and he arose and took that Christian Scientiist and he mopped the floor with him, smiting him sore upon the head and back so that, when he was through, congestion, abrasions, contusions, incipient ecchymoses and epistaxis were among the phenomena presented by his Christian countenance.

"There is no real suffering," said the unappreciative man, with scorn. "The bruises of your alleged head are entirely hypothetical; the choking I gave you was simply an idea of mine, and a devilish good idea, too; the pain which you feel is merely an intellectual phantasy, and your nose bleed is only one of the ideal conceptions of the cerebral mass. Believe these things not to exist and they vanish. Good-day, sir." And the patient departed.—The Medical Visitor.

RESUSCITATION OF THE APPARENTLY DROWNED.

The proper methods to be adopted for saving the apparently drowned should be familiar to every one, and as the present season is sure to witness the usual number of such casualties, The Dial would draw the attention of its readers to the simple but excellent rules published by the Michigan State Board of Health, as follows:

Rule 1.—Remove all obstructions to breathing. Instantly loosen or cut apart all neck and waist bands; turn the patient on his face, with the head down hill; stand astride the hips with your face toward his head, and, locking your fingers together under his belly, raise the body as high as you can without lifting the forehead off the ground (Fig. 1), and give the body a smart jerk to remove mucus from the throat and water from the windpipe; hold the body suspended long enough to slowly count one, two, three, four, five, repeating the jerk more gently two or three times. Then act by Rule 2.

Rule 2.—Keep the patient face downward and maintaining all the while your position astride the body, grasp the points of the shoulders by the clothing, or, if the body is naked, thrust your fingers into the armpits, clasping your thumbs over the points of the shoulders, and raise the chest as high as you can (Fig. 2) without lifting the head quite off the ground, and hold it long enough to slowly count one, two, three. Replace him on the ground with his forehead on his flexed arm, the neck straightened out, and the mouth and nose free. Place your elbows against your knees and your hands upon the sides of his chest (Fig. 3) over the lower ribs and press downward and inward with increasing force long enough to slowly count one, two. Then

suddenly let go, grasp the shoulders as before and raise the chest (Fig. 2); then press upon the ribs, etc. (Fig. 3). These alternate movements should be repeated ten to fifteen times a minute for an hour at least, unless breathing is restored sooner. Use the same regularity as in natural breathing.

Do not give up too soon. You are working for life. Any time within two hours you may be on the very threshold of success without there being any sign of it.

Rule 3.—After breathing has commenced, restore the animal heat. Wrap him in warm blankets, apply bottles of hot water, hot bricks, or anything to restore heat. Warm the head nearly as fast as the body, lest convulsions come on. Rubbing the body with warm cloths or the hand, and slapping the fleshy parts may assist to restore warmth, the straight; others may remove wet clothing, replacing at once clothing which is dry and warm; they may also chafe the limbs, rubbing toward the body, and thus promote the circulation.

Prevent friends from crowding around the patient and excluding fresh air; also from trying to give stimulants before the patient can swallow. The first causes suffocation; the second, fatal choking.

In suffocation by smoke or any poisonous gas, as also by hanging—proceed the same as for drowning, omitting effort to expel water and the like from windpipe. In suspended breathing from effects of chloroform, hydrate of chloral, electric shock, and the like, proceed by Rule 2, taking especial pains to keep the head very low, and preventing closure of the windpipe by the tongue falling back.

circulation of the blood, and the breathing also. The rubbing of the limbs should always be from the extremities toward the body. If the patient can surely swallow, give hot coffee, tea, milk, or a little hot sling. Give spirits sparingly, less they produce depression. Place the patient in a warm bed, and give him plenty of fresh air; keep him quiet.

Avoid delay. A moment may turn the scale for life or death. Dry ground, shelter, warmth, stimulants, etc., at this moment are nothing—artificial breathing is everything—is the one remedy—all others are secondary.

Do not stop to remove wet clothing. Precious time is wasted, and the patient may be fatally chilled by exposure of the naked body, even in summer. Give all your attention and effort to restore breathing by forcing air into, and out of, the lungs. If the breathing has just ceased, a smart slap on the face, or a vigorous twist of the hair will sometimes start it again, and may be tried incidentally, as may also, pressing the finger upon the root of the tongue.

Before natural breathing is fully restored do not let the patient lie on his back unless some person holds the tongue forward. The tongue by falling back may close the windpipe and cause fatal choking.

If several persons are present, one may hold the head steady, keeping the neck nearly

A SEVERE CASE.

Two weeks ago I was summoned to the bedside of Djoahnne Sdtleometzhler. The involute and labyrinthinate tangle of his symptoms made me suspect at first that he had absorbed his own name, but a further examination convinced me that he was a victim of typhomalariopneumophthisicotrychinotetanoataxionephreticospenitis.

Owing to the ubiquity of pathogenic bacilli, antiseptics are always indicated, so I exhibited calcium betanaptholalphamonolosulphonate. As the patient suffered from severe non-localized pain I gave orthooxyethlanamooobenzollamidoquinoline combined with salicylaldehydmethylphenylhydrazine. For his insomnia I gave trichloraldehydphenyldimethlypyrazoline.

His wife asked me what ailed him and what I was giving him. I told her and she said "yes," and turned very pale.

Upon examining him on the next morning I became convinced that the vital forces had misconstrued the remedies, and that a congerie of retroabsorptions had resulted. I then wrote out the following prescription:

Tetrahydrobetanaphthalamine,
Sodium thioparatoluidinesulphonate,
Orthosulphamidobenzoic anhydride,
Amidoacetoparaphenetidine,.....aa 1 dm.
M. Sig. A teaspoonful every hour.

When the wife presented the prescription to the druggist he instantly dropped dead. The patient is up and about, but something is wrong with his Broca's convolution—he mutters in a multisyllabic lingo that is intelligible only to modern pharmacal chemists. I am in hiding where the spiral melody of the woodbine that twineth blendeth ever with the sweet, low, soothing, murmurous, quadrisyllabic, rythmic tune of the gentle polygonum punctatum.—Ex.

THE MEDICAL DIAL

A Monthly Record of Medicine and Surgery.

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AUGUST, 1899.

LIQUID AIR IN MEDICINE AND SURGERY.

The remarkable discovery of Prof. Charles E. Tripler, by which liquid air can be produced in large quantities and at small cost, is likely to prove of great value in medicine and surgery. Liquid air is a clear bluish fluid resembling the color of the atmosphere on a clear day. Its temperature is 312° F. below zero. It contains nitrogen and oxygen with a small but variable proportion of carbon dioxide. As seen in an ordinary receptacle the liquid is boiling and gives off a white vapor which rapidly disappears, the intense cold causing the vapor to fall to the ground.

It may be called a dry liquid for it leaves no moisture. Applied to the hand, it produces a sensation of burning or tingling, similar to the feeling produced by the faradic current. The hand can be put into the liquid without injury if it is immediately withdrawn. When a cup of liquid air is thrown upon the floor it behaves as a cup of water would do if thrown upon a hot stove, for the floor of a room at ordinary temperature is about 400° F. above that of liquid air.

Possessing properties such as have just been stated, we would naturally expect a great deal from this new agency. One of the first applications to suggest itself would be the destruction of bacteria. If all forms of germ life are destroyed by a temperature of 160° F. above zero, we would naturally look for their destruction at 312° below. In this we are probably doomed to disappointment. In experiments made by Dr. A. Campbell White of New York (Medical Record, July 22, 1899) the effects of liquid air were tested on the germs of typhoid, anthrax, and diphtheria. To test the effect of extreme cold upon these germs without bringing them in direct contact with the liquid, pure cultures of virulent anthrax, diphtheria, and typhoid bacilli were put into capillary tubes. These tubes were marked for identification, sealed at both ends and dropped into a glass of liquid air. The liquid was renewed at intervals, thus keeping the tubes at all times submerged. Some of the tubes were removed at the end of thirty minutes, others in forty-five minutes, sixty minutes, and ninety minutes. After removing the tubes from the liquid and breaking off the sealed ends, they were dropped into separate culture tubes containing fresh sterilized bouillon. The bouillon tubes were placed in incubators at a temperature of 38° C., where they were allowed to remain for 48 hours, when they were all examined and found to contain pure cultures of anthrax, typhoid, and diphtheria bacilli according as they had been inoculated.

Dr. J. H. Huddleston tested the effect of liquid air on vaccine virus, and found that exposure for fifteen minutes to liquid air had no effect whatever on the power of the virus to produce vaccination.

So far, then, the application of liquid air to the destruction of bacteria has been disappointing.

In the treatment of diseased conditions of the tissues, as cancer, abscess, boils, carbuncles, etc., more encouraging results have been obtained. The air can be applied to the tissues in the form of a spray and by means of a swab dipped into the fluid. When a spray of the liquid is directed against the skin, the part

at once becomes anemic and perfectly white or colorless. If the application only lasts a few seconds, the color as quickly comes back and for several minutes afterward the skin is congested. Less than a minute suffices to freeze the part as hard as ice; but even then the circulation returns in a few minutes without any injury to the tissues.

Dr. White began the use of liquid air in the local treatment of ulcers of the leg, chiefly varicose, many chancroids and some specific ulcers. On this point he says: "So many of these cases have now been treated with liquid air that it can be said with positiveness that we have nothing at our disposal to-day which will so quickly, thoroughly, and with as little pain, clear up the edges and stimulate the surface of an ulcer to granulations as liquid air does when properly applied. The application should not be made so frequently as to break down the new granulations as they form. After the first two applications to a varicose ulcer, one application a week is usually sufficient. To a chancroid, or mixed sore, one application pretty generously applied is sufficient. A 'beefsteak' chancre requires two or three applications, three or four days apart. All ulcerations treated with liquid air seem to do better when followed by a dry dressing, such as aristol, subgallate of bismuth or stearate of zinc, instead of any unguent."

In the treatment of lupus by liquid air most encouraging results have been obtained by Dr. White. Three cases have been under his care. One case of lupus erythematosis, involving the frontal region, both ears and one side of the face, has been under treatment two months. After the second application the affected areas entirely desquamated, leaving the derma in perfectly healthy condition, slightly red and no eschar. This had been a very obstinate case and resisted all other methods of treatment. The two other cases promise equally good results. Carcinoma has been vigorously attacked by experimenters with liquid air and the unfortunate victims of this terrible disease are sure to fall a prey to the host of quacks and charlatans who are on the lookout for new and startling agencies. Dr. White cautiously expresses his opinion on this point, and although he has several cases under treatment and is very hopeful of results, he wisely refrains from drawing conclusions until wider experience shall have afforded more extended data.

Professor Tripler, realizing the dangers of the indiscriminate use of liquid air, and the tendency of dishonest and ignorant persons to use it in order to impress the public, has wisely refrained from furnishing it promiscuously for experimental purposes. At the Roosevelt out patient department and the Vanderbilt Clinic, however, regular and liberal supplies are furnished, and as the experiments are conducted under the supervision of competent and up-to-date physicians, the profession may confidently expect to have something in the near future which will be a valuable addition to their armamentarium.

PURE WATER.

When we consider that the human body is composed of seven-tenths water it would appear reasonable to expect that a decent regard for the welfare of life would demand that the supply of this necessary fluid should be as free from impurities and injurious substances as careful investigation could secure; but observation proves the fact that almost universal indifference prevails, as a rule, as to this matter. Very few of our large cities are supplied with water free from contamination by surrounding surface impurities received from cultivated soil and drainage pollution; and when rivers and small streams are utilized to supply the wants of the public, the danger of disease from such sources is unavoidable. In our old geographies rivers were spoken of as "watering" the lands through which they flowed; but this statement can be true only to a very limited extent as the evaporation can contribute slightly to dew; they are in fact drains and polluted by the cultivation of the lands through which they pass, and by the waste from the inhabitants living along their borders, and manufacturing establishments located in their vicinity; these latter being often of such a character as to deserve the name of nuisances. All these filthy contributions are poured into the streams at greater or less (often very little) distance above the intake pipes supplying the people of our cities with their water for culinary and drinking purposes.

Our "father of waters" may have been comparatively pure before his shores above Min-

neapolis had become well settled and the drainage from them entered freely into his liquid to be diluted and drank by our thirsty citizens; but analysis now proves the poisons present of more than one agent of disease dangerous to health. Pure air is good; beautiful parks enjoyable; but pure water is indispensable for the preservation of the health of men and animals. The city of Minneapolis has spent its millions for public buildings and luxurious quarters for municipal purposes, but has hesitated and delayed to expend the paltry sum of $150,000 for a filter to purify its water supply and maintain its excellent standard for health in the future.

Boston has expended millions of dollars to secure an abundance of pure water, and guards the sources of supply and reservoirs with jealous care to prevent contamination. New York has done likewise, and is still watching and attempting improvements and extensions. Chicago, some years ago, took its supply from the lake at a considerable distance from the shore; but while drawing its water from that source, it was pouring its drainage directly into the same water and pumping the mixture into the homes of the people. Favorable winds sometimes kept the floating filth away from the intake well; but quite as often unfavorable winds surrounded the source of supply with the floating refuse from the city. To remedy this state of things the intake pipes were carried farther out in the lake; but now a still better plan has been adopted by turning the drainage through a canal into the Illinois river, thence into the Mississippi river. This will help the city of Chicago; but what will the people do below? Already a vigorous protest is being made by St. Louis, who keeps a critical eye on all the actions of her rival for western precedence.

No lake is safe for a water supply when the drainage of the city is poured into the same water. Duluth has had experience with the danger of this experiment. The intake pipes were supposed to be carried out beyond the limit of danger from sewerage; but the pipes became defective near the shore, and the city had an epidemic of typhoid fever of an alarming magnitude.

There is no city in the world so liberally supplied with pure water as the city of Rome, Italy. It fairly gushes out from numerous fountains in all parts of the city in the most profuse quantities. It comes from the Alban and Sabine hills, and from uncultivated fields uncontaminated by animal or soil pollutions. The ancients appreciated the importance of the pure article, and spared no expense or trouble to secure the best to be had. Their waterworks are the admiration of engineers at the present day.

Paris derives its water supply from the Seine and the Marne, from the Ourcq Canal, from artesian wells, and from springs. The water from the artesian wells is the most pure; but these can contribute but a small proportion of the immense quantity consumed, and therefore much impure fluid must find its way into the stomachs of the gay citizens of the beautiful city.

London is supplied with water from the Lea and Thames rivers, and from wells; the latter furnish the purest water when sunk in the sands to the chalk formation. As to the water from the Lea and the Thames Dr. Frankland said, "Notwithstanding the most efficient possible filteration, it is becoming less and less fit for domestic use, on account of sewage pollution, about one-half of the water at present supplied being already grossly polluted, and a very large proportion of the remainder occasionally polluted." He recommended that the supply be obtained from the springs before they entered the rivers.

If the above is the best that has so far been accomplished by our large cities with unlimited powers and means, intelligent engineers and water commissioners, and the results are so far from furnishing pure water for family use, what can be expected of individual effort on farms throughout the country? Fortunate circumstances and situations for some, who may still have the "old oaken bucket hanging in open wells," may insure water of excellent purity; but too often, and especially among recent settlers, only holes in the ground, or shallow wells where surface water is collected for family use are found; or, possibly a pump in a well of deeper pretensions, but surrounding the same pools of standing and stagnant water, the waste from pumpings, which furnish convenient drinking supplies for animals and fowls, and where ducks and geese do congregate. The constant presence of this contaminated water filtering down through the soil cannot fail to reach the source from

which the family draws its supply. Then too, for convenience, the well is often located too near the stables where animals are housed, and the surrounding soil becomes, in time, thoroughly saturated with their excretions.

There are three sources of supply that promise water in native purity. Living springs protected from the approach of animals that may pollute the water, drive wells in selected localities free from surrounding soils liable to contaminate, and artesian wells of considerable depth, when large quantities are necessary. The latter afford the most available source for cities, and are unquestionably the most exempt from impurities. They are expensive, and yet their cost cannot largely exceed that of other provisions for supplies that require settling basins and other expensive means for purification.

DOCTOR ROBERT LAWSON TAIT, F. R. C. S.—Died on the 13th of June last near Birmingham, England, suddenly, and we may say prematurely, being only 54 years of age. He will be long remembered for his valuable contributions to surgery, and especially of the abdominal region. With largely developed combative qualities he was conspicuous for controversy with his fellow practitioners, and always defended his views with vigor. His strict attention to cleanliness in all surgical operations rather than anticeptic preparations gave him wide notoriety, and his success proved the fact that it is better to avoid poisonous germs than to admit them and then attempt their destruction by germicidal remedies.

We call attention to the advertisement of Northern Steamship Company, in connection with their superb line of steamers between Duluth and Buffalo. The accommodations are the admiration of all who have enjoyed the trip.

Office of Commissioner of Health.
City of Minneapolis.
July 25, 1899.

To the Editor of The Medical Dial:

Dear Sir:—According to your recent request, I herewith send you a few items that may be of interest to you in your work:

Number of deaths for July to date.....	119
Number of cases of measles to date.....	9
Number of cases of scarlet fever.....	8
Number of cases of diphtheria.....	7
Number of cases of typhoid fever.....	19
Number of deaths from consumption....	13
Number of deaths from typhoid fever....	4
Number of deaths from whooping cough.	4
Number of deaths from diphtheria.....	1
City's estimated population.....	225,602
City's census population (U. S., 1890).	192,833

Respectfully,

A. K. Norton, M. D., Commissioner. Edwina J. Peck, Clerk.

Reports of Societies.

SOUTHWESTERN MINNESOTA MEDICAL SOCIETY.

The annual meeting of the Southwestern Minnesota Medical Society was held at the Town Hall, Adrian, Minn., Thursday evening, July 20, 1899.

The meeting was called to order at 6 p. m., Dr. E. King, president, in the chair.

After the regular business the following programme was listened to and discussed:

Paper, "The Physician of To-day as a Prescriber of Medicine." Dr. E. King, Fulda, Minn.

Paper, "Differential Diagnosis of Small Pox, Chicken Pox, and Measles," Dr. G. R. Curran, Worthington.

The meeting then adjourned to attend the banquet at Hotel Slade.

The society reassembled at 10 p. m., when the following papers were read:

"Report of a Case of Arcromegaly," Dr. H. A. Tomlinson, St. Peter.

"A Report of a Peculiar Case," Dr. H. Neill, Sibley, Iowa.

"Report of an Obscure Case of Brain Disease," Dr. C. De Jong, Fulda, Minn.

"The Latest Fad in the Treatment of Gonorrhœa," Dr. M. Sullivan, Adrian, Minn.

The meeting then adjourned to the office of Dr. M. Sullivan, where a jolly good time was enjoyed till the wee sma' hours.

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION

Will hold its ninth annual meeting at Washington, D. C., September 19, 20, 21. The following is the Committee of Arrangements: Drs. D. Percy Hickling, chairman; Jos. Taber Johnson, G. Lloyd Magruder, Z. T. Sowers, Robert Reyburn, G. Betton Massey, Chas. R. Luce, Elmer Sothoron, Llewellyn Eliot, Clifton Mayfield. Willard's hotel has been chosen for the headquarters and special rates have been made. Many able papers have been promised and a very successful scientific meeting is assured. There will be a large and varied exhibition of electro-therapeutic apparatus in Willard's hall, which is well adapted for this purpose. The committee promises a very pleasant social program, including a reception by the president of the United States, an excursion to Mt. Vernon, Arlington and Alexandria—a buffet lunch to be served at Alexandria, and an evening visit to the Congressional Library to be viewed under electrical illumination. Provisions have also been made to visit the war, state, and navy department, the United States treasury and other public buildings.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

The American Association of Obstetricians and Gynecologists will hold its twelfth annual meeting in the Denison House, Indianapolis, Ind., September 19, 20 and 21. The association will meet in executive session with closed doors September 19th, at 9.30 a. m., for the election of new Fellows. The open session for the reading of papers will begin at 10 o'clock. Recess for luncheon at 1 o'clock p. m. Afternoon session at 3 o'clock; evening session at 7.30. The morning session will begin Wednesday at 10 o'clock for the reading of scientific papers. Afternoon session at 3 o'clock. At 6.30 p. m., Wednesday, the executive session will convene for the election of officers, and for other business. The morning session will begin Thursday at 9.30 o'clock. The afternoon session will be called at 3 o'clock and at 7.30 o'clock p. m., Wednesday, the annual dinner will be served. Ex-President Harrison and Senator Beveridge will probably make addresses at the dinner. Many papers have been promised. All members of the medical profession are invited to attend the scientific sessions.

Progress of Medicine.

GYNECOLOGY.

UNDER THE CHARGE OF

A. W. ABBOTT, M. D., F. A. DUNSMOOR, M. D.
J. H. RISHMILLER, M. D

INFRAPUBIC ROUTE IN SURGERY OF THE UTERUS AND ITS ADNEXA.

Wm. H. Wathen (Am. Gyn. and Obs. Jour., July, 1899) believes that we are but a little nearer a consensus of opinion than we were four years ago when Jacobs reported his large amount of surgery on the uterus per vaginam. The author does not claim that there are no diseases of the uterus that cannot be successfully treated by either the supra or infrapubic method but objections to the latter is lack of experience.

He is surprised at surgeons who oppose the infrapubic route because of their repeated insistence that by the abdominal route one can see the structures, which is not so in the vaginal method. Surgeons who have operated by both methods will state that nearly every structure treated from below is brought within view before it is severed. In enucleation of pus-tubes and ovaries, if we bisect the uterus, the eye can guide the finger as well as by the suprapubic route, and the finger can explore to the pelvic brim with its trained sense of touch. The statement that we must necessarily wound the intestines more in the infrapubic than in the suprapubic operations does not bear the test of intelligent experience.

He has performed vaginal hysterectomy since 1888, and the last few years has treated every pelvic disease by this route. During these eleven years he has never wounded the bowel or ureter, but has done so several times in performing cœliotomy. Every well-trained surgeon can attain the same degree of perfection if he will persist in his efforts.

Seldom a retractor is needed and by dispensing with them the operation may be done more rapidly and with less danger of wounding adjacent organs, for the fingers are the best retractors that can be used. If we bisect the uterus there is usually no difficulty in seeing the tissues before the knife or scissors is applied; but if we cannot the finger may be carried in advance of the cutting instrument and thereby prevent wounding the bladder, intestines, or ureters.

The author regards the vaginal method as more conservative. There is no danger of opening Douglas' pouch and bringing the tubes and ovaries within view, and, if not diseased, they may be returned without injury; but if not diseased enough to justify complete removal, they may be treated by any approved method.

The suprapubic method would confine the patient to bed for not less than two weeks, and require an abdominal support for one year, while in the vaginal method there is no danger of hernia or postoperative intestinal adhesions. The author has not done a suprapubic operation for ectopic gestation for four years but has performed about thirty through the vagina—all making an uninterrupted recovery. He admits that it would not be the correct procedure to attempt to complete an operation for extra-uterine pregnancy in intra-peritonæal rupture with an accumulation of blood in the abdominal cavity that could not be drained away.

With extensive accumulation of pus the patient may symptomatically recover by simple incision and drainage, and he has observed cases who afterwards complained of no pelvic trouble. This is particularly applicable in accumulations of pus following abortion or labor. In cases of local sepsis the formation of pus may be prevented by early vaginal incision—opening the folds of the broad ligament, or separating pelvic adhesions—and then lightly packing with iodoform gauze to keep the infected surfaces separated. He leaves the gauze in for five or six days and removes it gradually—beginning on the third day.

The writer has never observed that the length of the vagina has been altered or the secretion especially interfered with. His main objection to the suprapubic route, therefore, are delayed convalescence and the abdominal incision in consequence of subsequent development of hernia. J. H. R.

WHEAT AS FOOD.

Wheat is as perfect a food as any one article can be. There is perhaps no one substance which under long continued use meets the necessities of the body, but certainly wheat does if any one article can. Three classes of substances are required to nourish the body. First, the inorganic principles, such as salt, lime, potash, magnesia, iron, sulphur—these are found in vegetable and animal products. Second, nitrogenous principles in which nitrogen forms the chief element; and third, carbonaceous, or those in which carbon predominates. These three classes fulfill the different functions in the process of nutrition. One is as necessary as the other, though not needed in the same proportions. The inorganic substances, the salt, lime, potash, etc., enter into the organization of plants and into flesh in various proportions. The foods best fitted to nourish the body contain about fifteen parts of carbon to three of nitrogen; for every grain of nitrogen which is needed to build up the tissues of the body, fifteen grains of carbon are required. The tissues are built out of the carbonaceous foods. These represent the fuel, so to speak, which is burnt under our boilers, out of which the force comes to drive the machinery. The true food then is that which supplies about fifteen grains of carbon to one of nitrogen, together with some inorganic substance. Wheat represents the normal proportion much more closely than lean meat, fat meat, or butter. Eggs are a good type of organized food, as they contain both nitrogen and carbon. Milk is one of the perfect foods. We do not mean to say that we need all through life the same kind of food that is needed during the period of development; still, a perfect food may fairly be represented by milk and wheat, especially if the whole wheat is ground into meal.—London Health.

PEDIATRICS.

UNDER THE CHARGE OF
H. B. SWEETSER, M. D. J. P. BARBER, M. D

CEREBRO-SPINAL FEVER.

Dr. Wm. Osler delivered the Cavendish Lecture in London (Phila. Med. Jour., July, '99), choosing this subject. He mentions the close relationship of this disease to pneumonia. Sporadic cases of both occur in intervals of epidemic prevalence, though in pneumonia they are much more numerous. Epidemics of both are most striking in barracks, jails and asylums.

Even when not prevailing as an epidemic there may be remarkable house-epidemics of cerebro-spinal fever. The seasonal relations are the same in both, and the two diseases may prevail together. The abrupt onset, the great frequency of herpes in both, the leucocytosis, the almost identical character of the fibrino-purulent exudate in the two diseases, the frequent complication of pneumonia in epidemic cerebro-spinal fever and of meningitis in pneumonia are additional points of contact. The degree of contagion is about the same in both diseases and it has been claimed that the organism described in cerebro-spinal fever is only a variety or a degenerate form of the pneumococcus. On the other hand, pneumonia is a disease spread over the entire earth, there is no land immune from it. Epidemic meningitis is very rare, and in many countries is still unknown.

Croupous pneumonia attacks every age, the disposition increasing somewhat with increasing age, epidemic meningitis is a disease which affects children and young people; beyond thirty-five there is slight disposition to it. Croupous pneumonia has a typical course and a crisis; epidemic meningitis has no crisis. The complications of the two diseases are different, etc.

Of the twenty-one cases which Osler has seen, lumbar puncture was made in sixteen. In two cases, both mild, the puncture was made, in one on the seventh day, in the other on the sixth day, but no organisms were found. Of the remaining fourteen cases, in thirteen the diplococcus intracellularis was present on cover slips and in cultures. In the remaining case its presence was doubtful on cover-slips, and the slaphylococcus grew in culture. It is worthy of note that in two of the five cases which came to autopsy the diplococcus intracellularis was not found, although it was present in the fluid obtained by lumbar puncture sometime previous to death. In one of these a terminal infection of streptococcus and the bacillus colicommunis had taken place.

Osler combats Netter's theory that cerebro-spinal fever may be caused either by the pneumococcus or the diplococcus intracellularis. He admits that a primary cerebro-spinal meningitis may be due to the pneumococcus, but says that both clinically and bacteriologically, this form can be distinguished from the disease in question. He thinks it most unlikely that a remarkable specific affection like cerebro-spinal fever should be caused by two different organisms. "On the whole, then," he says, "our observations support those of Weichselbaum, Jaeger, Huebner, Councilman and others, that in epidemic cerebro-spinal fever there is an organism with special cultural peculiarities which may reasonably be regarded as the exciting cause of the disease.

Concerning the diagnosis he remarks that meningitis is not always easy to recognize clinically. Mortifying post-mortem disclosures are even more common with it than with pericorditis. The unexpected meningitis of pneumonia, of Bright's Disease, and of other chronic affections, teaches us how latent may be the process; on the other hand, who has not in typhoid fever and in pneumonia, made a positive diagnosis of meningitis, and has found post-mortem the cerebro-spinal membranes perfectly free. Sooner or later the truth of Stokes dictum is brought home to each one of us: "There is no single nervous symptom which may not and does not occur independently of any appreciable lesion of the brain, nerves or spinal chord."

After mentioning the contrast between the abrupt onset of primary meningitis and the latency of secondary, he devotes considerable space and gives a number of charts to show the peculiar variability of the fever. Of his twenty-one cases thirteen had a skin eruption of some form. Herpes was present in eight cases. A diffuse erythema about the chest and abdomen and over the joints was present in four cases. Petechia were noticed in eight cases, extensive in only three. In three cases a very remarkable and peculiar rash was present in the neighborhood of the joints, particularly over the extensor surfaces of the knees and elbows and about the ankles. There was a diffuse, livid erythema of great intensity, on which purpuric herpes developed—a vesicular rash, the individual vesicles of which became filled with blood. As the erythema faded and the vesicles dried, they could be felt as little nodular hemispherical bodies, which could be felt for a week or ten days.

A leucocytosis was present in every case. In four the first blood count was made on the third day, and the leucocytosis was 25900, 14500, 40800, and 32000 per c. m. The first count was made on the fourth day in four cases, and the leucocytosis was 26240, 31800, 19300 and 7600 per c. m. In four cases the

leucocytosis exceeded 40000 per c. m., the maximum count was 47000 on the ninth day of a fatal case. The leucocytosis persists even in the most protracted cases. As a rule there was no special reduction in the number of red blood corpuscles. In one case the diplococcus intracellularis was isolated from the blood during life. He thinks leucocytosis has no special value in the differential diagnosis of the various forms of meningitis, although the leucocytosis seems not to be so high or so persistent as tuberculous meningitis. Arthritis was present in two of his cases. In one of these the disease began with arthritis, and in the other the diplococcus intracellularis was isolated from the pus in the joints. Kernig's sign was present in every case in which it was sought for.

Regarding lumbar puncture he says that during the past ten years no single measure of greater value in diagnosis has been introduced than Quincke's lumbar puncture. We are now able in a large number of cases to make a prompt decision as to the existence of meningitis, and are further enabled to recognize the form of the disease. It is a simple, quite harmless procedure, and in a majority of cases can be done without general anasthesia, or with the aid of a local freezing mixture. A dry tap is rare in cerebro-spinal fever; the needle may be plugged with fibrim, or a nerve root may come directly against the orifice. Puncture in the third or fourth interspace may be negative, while in the second a free flow is secured. In one of his cases in which no fluid was obtained, the autopsy showed an exudate as thick as butter. A first puncture in a case is very often negative. Very often at first a few drops of blood flow, then a clear or turbid fluid, either drop by drop, or sometimes in quite a strong stream. In a great majority of all cases when meningitis is present the fluid is turbid. In rare instances clear fluid may be obtained when meningitis exists, and in a protracted case the fluid may be turbid at one puncture and clear at the next. A clear fluid may be obtained from a puncture in the second lumbar interspace, while lower down a turbid fluid may be withdrawn. Several observers have noted that the fluid may become clear in the intermissions of the disease. Only once was clear fluid removed in an exacerbation; on several occasions bloody fluid was removed in case eighteen. In one case in which turbid fluid had been withdrawn at one puncture, at a subsequent one, before death, blood flowed from the needle and at post-mortem there was extensive meningitis and a rupture of the basilar artery with hemorrhachis.

The number of organisms found bears no constant relation to the intensity of the symptoms. In acute cases they are present, as a rule, in large numbers. The later the disease the less likelihood is there to find the diplococcus intracellularis in the fluid; but he has found them in the second, third, fourth, fifth, and seventh weeks.

As to the therapeutic value of lumbar puncture he seems undecided. He quotes Williams, of Boston, as saying he had seen beneficial effects, and Wentworth, who has a large experience, has not seen anything more than a temporary relief lasting a few hours. Netter claims that he has seen convulsions, that had lasted a long time without intermission, cease after the withdrawal of only two drams of fluid. He (Osler) has given this point his closest attention, and many times has performed the puncture directly for its supposed benefit. It is to be regretted that he has given the result in only three cases, and in only one of them any more than the note of improvement after a single puncture. Case sixteen he reports fully giving chart. In all seventeen punctures were made between the twenty-uinth and the seventy-fifth day of the disease, of which fourteen were positive. A turbid pale yellow fluid was removed at each tapping. On five occasions 100 c. c. or more were obtained, once 125 c. c. and once 126 c. c. Following the two first effective tappings the patient appeared better, the temperature dropped, and he seemed much brighter; but he soon became worse, and the fever rose. Following the sixth, seventh, eighth, and eleventh punctures the temperature fell 4.5°, 3.8° 4.2°, and 5.8°. There was no change in the general condition, though he sometimes was a little brighter, and the drop in fever followed so directly that it seemed only natural to attribute the good results to the lumbar puncture. The thirteenth puncture, however, was negative, yet the temperature fell 5.1°, and after the fourteenth tapping the temperature rose 2.6°. He concludes, "Evidently not the withdrawal of the fluid, but the peculiar character of the disease, already spoken of, was responsible for the remissions."

There were no special drugs used in the treatment of his series of cases. Morphia was given freely to control the pain. Ice sponging was employed when the temperature rose above 102.5°. The mortality—nine of twenty-one cases—was considered low, as the cases were as a rule quite severe. In two of the cases the spinal canal was opened, drained and irrigated. He says, so far as he knows, an extensive lammectomy had not been done for acute spinal meningitis until his first case, Nov. 6th, 1898, in which the operation was suggested and performed by Dr. Harvey W. Cushing. The spinal canal was thoroughly irrigated with salt solution and a quantity of purulent exudate washed out. No change followed in the existing paraplegia. The bladder and kidneys became infected, and he died about two months after the operation. The paraplegia persisted. At autopsy the spinal

meninges were smooth and looked perfectly normal. It was impossible to say where the dura mater had been incised, and there were neither adhesions nor areas of thickening on the pia-arachnoid. There were extensive changes in the cord itself and the nerve roots. In case twelve lammectomy was performed on the fourth day by Dr. Cushing. The patient was very ill, and the spinal symptoms were especially pronounced. A catheter was pressed beneath the dura mater and the membranes drained and irrigated with salt solution. For several days he seemed much better. He developed a hemorrhagic cystitis and pyelonephritis, and died on the sixth day after the operation.

Osler thinks, on the principle of a desperate remedy for a desperate disease, the operation seems justifiable in certain sev(re cases, in which, as in his first case, the spinal symptoms are very marked. J. P. B.

Two papers on Cerebro-Spinal Fever were read before the section of Practice of Medicine at the recent meeting of the Am. Med. Assn., at Columbus (Journal of the Am. Med. Assn., July 22, 1899), one by Dr. George Longhead Eyster, of Rock Island, Ill., and the other by Dr. T. N. Miller, of Rockford, Ill.

Dr. Eyster reports two cases, one of which illustrates in a remarkable way the intermittency of the fever, and symptoms of the disease. He isolated the diplococcus intracellularis from the spinal fluid and also from the nasal mucus in each case. In both cases there was a history of preceding coryza and a mucopurulent discharge from the nose was also present in each case.

Dr. Miller's paper is interesting principally on account of the discussion it elicited.

Dr. J. C. Wilson, of Philadelphia, called attention to the value of Kernig's sign in diagnosis, and to the contagiousness of the disease. He advocates such measures as isolation and disinfection until the question of transmissibility is finally settled. He also mentioned the value of full doses of opium in the treatment of the disease.

Dr. J. H. Musser, of Philadelphia, spoke of the value of lumbar puncture as a diagnostic and therapeutic measure. He has no doubt that in some cases there is great relief. It is a relief to the headache and to the irritative symptoms that occur in the early period of the disease. He says withdrawal of fluid often relieves the stupor. He mentioned laminectomy and is satisfied it is a rational procedure when perfect asepsis can be maintained and where there is great pressure. Outside of mechanical procedures, he thinks opium is the only drug in the treatment of the disease.

Dr. Scott, of Iowa, speaking of the contagiousness of the disorder said he believes that the origin of infectious diseases is decomposing animal and vegetable matter.

Dr. C. F. Wahrer, of Ft. Madison, Iowa, had a severe and unusually prolonged case following la grippe. He gave her gelsemium, opium, belladonna, bromide, chloral and ergot, as well as several other things that the symptoms called for; made hot applications for prolonged periods, which relieved her of pain, and when she had sufficiently recovered, sent her to New Mexico, when she returned splendidly recovered.

Dr. Bradwell, of St. Louis, demonstrated the diplococcus in thirty-three of thirty-four cases, but he seemed a little mixed on his technique. He found Kernig's sign present in all of the thirty-four cases. He mentioned one case of very great interest. "The case occurred in a woman who was in the hospital and was at the seventh month of pregnancy. She was sick two days; the disease was of the fulminent order. The fœtus was dead. The woman lived one day. The autopsy showed a meningitis of both mother and child, which was confirmed by bacteriological methods. The diplococcus was found in both mother and child."

Dr. J. M. Anders, of Philadelphia, mentioned a case occurring in a tenement where a great many children, about thirty, had been exposed to it and no other case occurred in the building, and from this one case draws the remarkable conclusion that this shows it to be a non-contagious disease. J. P. B.

THE PREVENTIVE TREATMENT OF PUERPERAL ECLAMPSIA.

Richard C. Norris, in July number of Am. Gyn. and Obs. Jr., says the rational and efficacious treatment of eclampsia consists in prophylaxis. He assumes that toxins of unknown composition and from various origins are the underlying factors of puerperal eclampsia.

The healthy organism at best is a manufactory of poisons, and, quoting from Boufe, "Even the healthy body makes incessant attempts at suicide by intoxication." However health is maintained by two sets of organs—the one to transform, the other to eliminate.

During pregnancy these protecting organs are put at a disadvantage and a break in the physiological equilibrium is the result; the blood contains an abnormal quantity of leucomains and the toxicity of the urine is decreased, while that of the blood serum is increased; there are fewer red blood corpuscles in the blood; the heart and lungs do extra work; while that of the kidneys and liver is also increased.

Too much stress cannot be laid upon the insufficiency of the liver, as a number of complications of pregnancy depend directly upon the faulty action of the liver, the kidneys having a secondary role in their production.

The more serious complications are such as ptyalism, pruritis and incorrigible vomiting lasting after the fourth month, while milder toxemia produces the usual vomiting, dyspepsia and constipation.

The nervous system may suffer, likewise the skin producing herpes and bronzing. Thus the prophylaxis will necessarily be hygienic as well as medicinal and obstetric. The hygienic consists in good pulmonary ventilation and a diet of easily di-

gested, readily oxidized, nonconstipating and nontoxic food.

Intoxication is first evidenced by such symptoms as neuralgia, irritable temper, vomiting, salivation and hebetude. The urine is usually free from albumen, but the area is diminished, while uric acid is increased.

For practical purposes the percentage of urea, the specific gravity and the amount voided must be determined.

For the medicinal treatment of mild cases calomel with regulation of diet is sufficient. Calomel not only acts favorably on the liver but also as a marked intestinal antiseptic.

For graver cases complete rest in bed, the patient assuming the genupectoral position at intervals, an exclusive milk diet, and in some cases the patient should be placed in the Trendelenburg posture and the colon daily flushed with two gallons of normal salt solution. In urgent cases hypodermoclysis may be desirable. Hot air baths and hot pack should only be used in cases requiring the emptying of the uterus. Epsom or Rochelle salts are considered best for the rapid elimination of waste products. Diuretics, aside from copious drafts of water, are inadvisable since the overtaxed kidneys should not be crowded.

No fixed rule can be laid down for the termination of pregnancy, but should the toxæmia continue to increase steadily in spite of all treatment, this, more than any other symptom, may justify the emptying of the uterus. J. P. B.

THE ÆTIOLOGY OF ECLAMPSIA AND THE DIAGNOSIS OF IMPENDING ECLAMPSIA.

Edward P. Davis, in July number of American Gyn. Obs. Journal, mentions some of the various theories that have been advanced, but sums up the situation by saying that at the present time the bulk of evidence goes to show that it is due to a profound toxemia originating in mother and fœtus, but that the exact agent has not been isolated.

Mention is made however of the experiment of Merletti with ammonium carbonate in solution, which produced eclampsia and death in animals, and whose organs showed the same lesions as found in eclampsia.

Cellular necrosis was the chief characteristic. Merletti declared a profound intoxication by the excess of incomplete urea in the blood caused convulsions and death with parenchymatous degenerative changes, with or without hæmorrhages.

The urine of the eclampic patients produces but feebly toxic effects when injected into animals, while that of noneclamptic persons is often quite the reverse. "When, however, the blood serum of eclamptics was carefully studied and a microscopic study of the organs of eclamptic patients showed multiple emboli as a constant pathological change, it became evident that the toxines of eclampsia cause convulsions, because they are absent from the urine and excretions and present in the serum of the blood and in the organs of the body. It is natural then to find the urine during eclampsia not highly toxic."

Serum albumen may be present in the urine, but, unless in excess, or it is accompanied by kidney debris, it is a symptom of importance.

While convenient tests for toxines are lacking, yet we have in urea a clinical index of the metabolism of the body which may be utilized to designate the lack of assimilation.

A diminished amount of urea excreted indicates that toxines are retained, while a normal amount indicates but little retained. The pregnant woman rarely excretes the normal amount, but less than 1.5 per cent. demands attention.

Especial attention must be directed to the functions of the liver and intestines. When close scrutiny indicates that the liver, kidneys, skin, bowels, and lungs are deficient in action, investigation of the nervous system will show that the patient is suffering from retained toxines. J. P. B.

Neurology and Psychiatry.

UNDER THE CHARGE OF

R. O. BEARD, M.D., W. A. JONES, M. D.

DISORDERS OF THE NERVOUS SYSTEM ACCOMPANYING GYNECIC DISEASES.

The author (R. S. Hill, M. D., Journal of the Amer. Med. Assn., July 15, 1899), describes eight cases of operation in gynecological cases in six of which acute mania occurred during the first ten days after the operation. One of the other two also died insane within a year. According to his own account all the patients were in an anaemic, exhausted and nervous condition before the operation, and not a few of the symptoms described as justifying operation might fairly be laid to the general condition. A large part of the paper is taken up in an elaborate description of the way in which the pelvic nerves might affect the brain. Such theories are doubtless good, but it might be even better to know enough to put one's patients in good condition before performing two or three operations on the pelvic viscera. Surely an attack of acute mania lasting two or three weeks, even if finally recovery occurs, has injured the stability of the brain cells rather than improved them. Perhaps in Alabama surgery has made more rapid progress than neurology. Certainly Dr. Hill gives no evidence in his paper of the shadow of a doubt as to the propriety of the operations in view of the subsequent history. W. A. J.

CONCERNING KERNIG'S SIGN IN MENINGITIS.

The author (James B. Herrick, M. D., American Jour. Med. Sci., July, '99) recounts an investigation to determine the value of Kernig's sign made in nineteen cases of meningitis and in one hundred other cases, twenty-five of which were normal. In 1884 Kernig, of Russia, announced that if a patient with meningitis be made to sit up, as on the edge of the bed, the thigh therefore being at a right angle with the body, it is found extremely difficult to extend the leg because of the presence of a marked flexor contracture. The sign may also be obtained by bringing the thigh at right angles to the body as the patient lies in bed on the side or preferably on the back, and the leg then extended. The only requirement seems to be that the thigh should be placed at a right angle with the body before the attempt is made to extend the leg. Not infrequently in delirious patients a little, gentle force must be used

before the jerking and tense muscles yield. The same is true of some spastic conditions. But where Kernig's contracture is present patience and gentleness do not cause the muscles to yield, and the back of the patient can generally be lifted from the bed without the knee giving way. Of course there must be excluded those cases in which local causes could interfere with the proper extension of the leg, such as rheumatic or other forms of arthritis of the hip or knee, myositis, old contractures from nervous diseases, and sciatica.

Astonishingly little attention has been given to this sign, but last year Netter reported two series of cases, numbering seventy in all, in 90 per cent. of which the sign was present.

Herrick's series of cases gives an equally favorable result. Of the nineteen cases of undoubted meningitis examined, the sign was present in seventeen, or 89.4 per cent. of the cases. In the two cases in which it was absent, both children, the single examination was made a short time before death, and it was noticed at the time that there was a general marked laxity of all the muscles. In eight of these cases the diagnosis was confirmed by autopsy. In one case of miliary tuberculosis the sign was absent at first, but later made its appearance at the same time with the other evidences of cerebral involvement—retraction and rigidity of neck, severe headache, paralysis of ocular muscles. In some of the cases its presence was of distinct value in making the diagnosis.

Netter records a case of great value. In a typhoid with typical symptoms and no clinical evidence of meningitis, Kernig's sign was marked. Autopsy showed typhoid, and also a cerebro-spinal meningitis due to the staphylococcus pyogenes and the bacillus typhosus.

In the twenty-five normal persons and seventy-five cases of various diseases other than meningitis examined for this phenomenon it was absent in ninety-eight and present in two. Of these two one on autopsy proved to be subdural hemorrhage, and the other was a case of gonorrhœal rheumatism who had lain for four weeks with the knees flexed, as this was the most comfortable position.

Herrick concludes that this sign is present in from 80 to 90 per cent. of cases of meningitis and is only exceptionally present in other diseases. W. A. J.

ON ASTASIA-ABASIA, WITH A CASE.

The author (J. C. Wilson, M. D., Amer. Jour. Med. Sci., July, '99) gives the sixth case reported by American physicians of this syndrome, and adds that but forty-three cases are on record in medical literature.

The case was that of a young woman twenty-four years of age, of distinguished but highly neurotic family. On the paternal side there is an uncle epileptic and an aunt addicted to morphine; on the maternal, two uncles dipsomaniacs. Her father was very successful in business, had grandiose ideas, and lost a large fortune: now is greatly absorbed in tracing genealogies. Her mother and one sister died of diphtheria, and an older sister who is in excellent health is very excitable. The patient kept house for her father, was intelligent and cheerful, and in excellent health until a recent unsatisfactory love affair. Early in January she began to have bath pruritus, and one night just at the close of menstruation she was aroused at midnight to receive an unimportant telegram. The next day on attempting to arise, she found it impossible to stand or walk. She described her condition in the following terms: "My left leg feels as if it were made of cotton"—an expression already recorded—and "I feel like a combination of a child learning to walk and a drunken woman."

Examination showed slight pallor, but otherwise all organs and functions were normal. Lying in bed or seated on a chair, the lower extremities showed nothing abnormal; motor power, freedom and precision of movement, and the muscular senses were unimpaired; knee-jerks decidedly increased; ankle-clonus not present; the plantar reflex intact; electrical reactions normal. There was no rigidity, ataxia, or paralysis. Sensation to touch, temperature and pain appeared to be unimpaired. She complains, however, of numbness and pricking throughout the left lower extremity, including the foot, leg and thigh, and also in the right foot, and outer surface of the right leg below the knee. Upon attempting to stand her legs bent under her, owing to abrupt movements of flexions of the knee followed by rapid extension. These contortions necessitate a compensatory movements of the upper extremities and head in order to maintain equilibrium. Upon attempting to walk with assistance these difficulties were increased.

Treatment consisted of rest in bed, valerianate of zinc, one grain four times a day, massage and faradism. At the end of four weeks the motor disturbance and paræsthesia had wholly disappeared, but about this time distinct hysterical phenomena—vomiting, intermittent tremor of the hands, vertigo, sensations of throbbing in the abdomen, emotional manifestations, weeping and excitement without apparent cause—manifested themselves.

That astasia-abasia is not a nosological entity, but a syndrome, must be conceded. Church's statement that it is due to a systematized amnesia embodies that theory which is generally accepted. In the foregoing case it was a symptom of hysteria.

Many of the cases have occurred in connection with organic disease but cases of organic disease of the nervous system are often associated with hysteria. W. A. J.

Book Notices.

THE DISEASES OF THE NERVOUS SYSTEM, a Text-Book for Physicians and Students, by Dr. Ludwig Hirt, Professor at the University of Breslau; translated, with permission of the author, by August Hock, M. D., formerly Assistant Physician to the Johns Hopkins Hospital, now the McLean Hospital, Waverly, Mass.; assisted by Frank R. Smith, A. M. (Cantab.), M. D., Instructor in Medicine in the Johns Hopkins University; with an Introduction by Wm. Osler, M. D., F. R. C. P., F. R. S., Professor of Medicine in the Johns Hopkins University, etc. With one hundred and eighty-one illustrations. New York: D. Appleton and Company, 1899. Price, $5.00 cloth; sheep $6.00.

The above work takes its place in the "Medical Library Series" of the Publishers, and will be widely read in its translation into English. The author is well known as a teacher in nervous diseases, and the introduction to the English translation by Dr. William Osler, will add to its favorable reception by American readers. Dr. Osler remarks that, "Where all is so good it is invidious to select, but the chapter on Tabes is an illustration of our author's lucid, and, at the same time, thorough treatment of his subject." The same statement would be true of the complete work; but the chapters on Aphasia and Parasites of the Brain are especially interesting. In regard to the former Dr. Hirt says, "The speech center, which is situated partly in the frontal, partly in the temporal lobe of the left hemisphere, is certainly of larger extent than is commonly supposed." This fact is fully illustrated by descriptions and diagrams concerning the symptoms of diseases affecting the speech.

As to the parasites found in the brain, cysticerci and the echinococci are described as the most important. The cysticerci are frequently found at the autopsy when their existence during life was not suspected. Of the four cases observed in the author's clinic, only one was diagnosed during life, and "this one not not because it presented characteristic symptoms, but owing to the history of the patient, from which we learned that he was in the habit of frequently eating raw pork."

We can recommend the work as a valuable addition to the literature on nervous diseases.

We have much pleasure in drawing the attention of our readers to the following list of new books which will be published by W. B. Saunders, Philadelphia, on or before September 1, 1899:

The International Text-Book will present a complete treatise on the theory and practice of surgery in its most advanced aspects. There is a real need among practitioners and advanced students for a work on surgery, encyclopedic in scope, yet so condensed in style and arrangement that the matter usually diffused through four or five volumes shall be given in one-half the space and at a correspondingly moderate cost.

In his Pelvic Inflammations, Dr. Pryor directs the attention of the general practitioner and specialist to a surgical treatment of the infectious pelvic diseases of women. The subject is a most important one, insomuch as inflammatory lesions constitute the majority of all pelvic diseases.

Kyle on the Nose and Throat, Heisler's Embryology, and Jackson's Disease of the Eye are practical text-books for students, written by men of long and successful experience as teachers of these branches.

Special features of Dr. Kyle's book are the logical classification of the diseases, the modern pathology illustrated with new and original cuts, and the extended consideration given to details of treatment.

DEATHS UNDER "CHRISTIAN SCIENCE."

Reports of deaths more or less due to "Christian Science" are coming in so rapidly from all parts of the country that the patience with which the country endures the crimes of the would-be exorcists is simply amazing. Notes of protest are, indeed, to be heard coming from various directions, but most of them are sounded by organizations of little influence or authority, like the Medico-legal Society of this city, or in courts of limited jurisdiction and unimpressive powers. The great medical associations, state and county, content themselves with occasional ridicule of the "Scientists" and their dupes, but they do nothing effective, while the various legislatures ignore altogether this danger to the life and health of the whole population of the country and devote their energies to matters many of which are of much less public importance. Meanwhile the high priestess of ignorant credulity intermits her propaganda only long enough to make affidavit that she is not yet dead, and, having demonstrated her continued existence, proceeds industriously with the appointment of new book agents and the acquisition of more wealth. All this is amusing enough in its way, but it is also humiliating and dangerous. Every "Christian Scientist" is a potential center of infection for bodies as well as minds, and that the victims of this infection are many is shown every day that passes.—New York Times.

It is said that lactic acid and glycerin, equal parts, will remove freckles.

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PENN. MED. JOUR., PITTSBURGH. (25)

Pott's Disease and its Modern Treatment, Stewart L. McCurdy, M. D., Pittsburgh.

Report of a Case of Cerebellar Abscess, J. B. Crombie, M. D., Alleghany.

The Treatment of Appendicitis, R. H. Gibbons, M. D., Scranton.

Stricture of the Rectum, William M. Beach, M. D., Pittsburgh.

To Make Clean the Hands, and the Field of Surgical Operation with a Job, W. S. Forbes, M. D., Philadelphia.

Some Atypical Features of Certain of the More Common Nervous Diseases, Theodore Diller, M. D., Pittsburgh.

The Importance of Early and Proper Attention to Slight Ailments of the Eye, G. W. Allyn, M. D., Pittsburgh.

The Normal Movement of the Ocular Muscles, Joseph E. Willets, M. D., Pittsburgh.

The Attitude of the Family Physician to His Patients in Respect to Opticians, Louis J. Lautenbach, A. M., M. D., Ph. D., Philadelphia.

MED. AND SURG. MONITOR, INDIANAPOLIS. (10)

Cerebral Paralysis, Daniel R. Brower, M. D., Chicago.

The Role of Primary and Secondary Osteoplastic Surgery in the Treatment of the Extremities, Thomas H. Manley, M. D., New York.

Physician and Patient—Legal Aspect of Professional Secrets, Judge Charles E. Cox, Indianapolis.

Treatment of Puerperal Septicemia, Luther P. Luckett, M. D., Terre Haute, Ind.

N. W. LANCET, ST. PAUL (JULY 1). (10)

Medical Federation, President's Address Before the Minnesota State Medical Society, F. A. Dunsmoor, M. D., Minneapolis.

Abdominal Hysterectomy in the Treatment of Malignant Disease of the Uterus, J. L. Rothrock, M. D., St. Paul.

A Plea for Better Disinfection in Typhoid Fever, F. B. Miner, A. B., M. D., Gardner, N. D.

Probing the Nasal Duct, J. H. Rinelaub, M. D., Fargo, N. D.

N. W. LANCET (JULY 15).

Modern Veterinary Practice, M. H. Reynolds, M. D., V. M., Minneapolis.

Surgical Treatment of Strabismus and Heterophoria, with report of Sixty-seven Cases, H. A. Beaudoux, M. D., Fargo.

Vetro-Suspension of the Uterus, Aug. Eggers, M. D., Grand Forks.

Lights and Shades of Life Among the Insane, D. S. Moore, M. D., Jamestown, N. D.

N. Y. LANCET. (10)

Abnormal Reaction of Stomach Contents Producing Constipation and Diarrhea, John P. Sawyer, M. D., Cleveland, Ohio.

Painful Rheumatoid Arthritis of the Left Hip—Treated with Ice as a Local Application, W. Ewart, M. D., New York.

Eye Complications of the Acute Specific Fevers, Percy Fleming, M. D., New York.

Foreign Bodies in the Pharynx and Oesophagus, Robert Jones, M. D., Liverpool.

A Case of Ear Cough, Mayo Collier, M. D., London.

A Note on Hemophilia, E. Mansel Sympson, M. D.

A Note on X-Rays and Color-Blindness, Sidney Stephenson, M. B., F. R. C. S., Edinburgh.

Picric Acid in Superficial Burns, Ian Macdonald, M. D., Rio Tinto, Spain.

Dilatation of the Stomach and Stricture of the Pylorus, A. W. Mayo Robson, M. D., New York.

Erythrol Tetranitrate in Angina Pectoris, Boughton Addy, M. D., Southport.

ST. L. MED. AND SURG. JOUR. (10)

Experimental Study of Children, More Especially of Washington School Children, Arthur Macdonald, M. D., Washington, D. C.

Chlorosis, S. A. Scher, M. D., Hamburg, Germany.

MED. REGISTER, RICHMOND. (15)

Mastoiditis: Diagnosis and Treatment, John P. Davidson, M. D., Richmond.

The Evolution of Therapy, Simon Baruch, M. D., New York.

Etiology and Treatment of Alveolar Hemorrhage, John H. Hartman, D. D. S., Richmond.

Peculiar Case of Twin Birth, J. B. Fisher, M. D., Midlothian, Va.

JOUR. OF SCIENTIFIC MED., CHICAGO. (10)

Treatment of Neurasthenia—with Clinical Reports, Milton P. Creel, M. D., Central City, Kan.

Advantages of Dispensing Our Own Drugs, H. Stein, M. D., Altamont, Ill.

MED. SUMMARY, PHILADELPHIA. (10)

Cholera Infantum, William Hooker Vail, M. D., St. Louis.

Treatment of Erysipelas, Charles E. Tucker, M. D., Joppa, Ill.

Does Tobacco Cause Amblyopia? Wm. H. Morse, M. D., Westfield, N. J.

Thermal Convulsions of Children, A. J. Mann, M. D., Luz, Ga.

Chips from My Workshop, Joseph Adolphus, M. D., Atlanta, Ga.

Medical Legislation, J. W. Lockhart, St. Joseph, Wash.

Eth-Pharmal, Ben H. Brodnax, M. D., Brodnax, La.

WESTERN CLINICAL RECORDER, CHICAGO. (10)

The Rational Diagnosis, being the Annual Address before the Wisconsin State Medical Society, Henry B. Favill, M. D., Chicago.

A Typical Pneumonia following Grippe, A. T. Holbrook, S. B., M. D., Milwaukee.

Report of a Case of Probable Thrombosis of the Right Sigmoid Sinus, Arising from Acute Purulent Otitis Media; Recovery Without Operation, F. D. Brooks, M. D., and Thomas C. Phillips, B. S., M. D., Milwaukee.

MEDICAL HERALD, ST. JOSEPH. (20)

The Relation Between Doctor and Dentist, Daniel Morton, M. D., St. Joseph.

Report of the Committee on Progress of Obstetrics, C. C. Dunnaker, M. D., Kansas City.

The Treatment of Gastric and Intestinal Diseases, Johann Landau, M. D., Heilkunde, Mo.

The Specialist, W. C. Fulkerson, M. D., Blue Hill, Neb.

The Treatment of Diabetes, C. H. Wallace, M. D., St. Joseph.

WISCONSIN MEDICAL RECORDER, JANESVILLE. (10)

Gastro-Intestinal Diseases of Children, or Summer Complaints, Joseph Adolphus, M. D., South Atlanta, Ga.

Gastro-Intestinal Troubles of Old People, Ralf St. J. Perry, M. D., Farmington, Minn.

Diarrhœa, F. H. Benedict, M. D., Weedsport, N. Y.

Direct Massage in the Treatment of Glaucoma (7th paper), J. A. Pratt, M. D., Aurora, Ill.

MEDICAL SENTINEL, PORTLAND, ORE. (25)

The Pathology and Therapy of Cancer—with Special Reference to Cancer of the Stomach, Augustus C. Bernays, M. D., St. Louis.

Acute Gastro-Intestinal Affections in Children, George M. Wells, Portland, Ore.

MERCK'S ARCHIVES. (10)

Importance of Internal Remedies in General Surgery, Thomas H. Manley, M. D., New York.

The Thyroid Gland in Obesity, Horatio B. Wood, M. D.

The Usefulness of Potassium Iodide in Cerebrospinal Meningitis, H. A. Moody, M. D., Mobile.

The United States Pharmacopœia, John Forrest, M. D., South Carolina.

JOUR. OF COMP. MED. AND VET. ARCHIVES, PHILADELPHIA. (30)

Stock-Farm Veterinary Practice as a Post-Graduate Course, A. M. Lushington, V. M. D., Lynchburg, Va.

Cornstalk Diseases, A. Bostrom, D. V. S., Minden, Neb.

Leukæmia, B. F. Kaupp, D. V. S., Kansas City, Mo.

Serum as a Remedy for Hog-Cholera, J. D. Sprague, V. S., David City, Neb.

Synopsis of a Report on Osteoporosis, C. J. Marshall, V. M. D., Philadelphia.

The Veterinarian as a Naturalist, W. H. Dalrymple, M. R. C. V. S., Baton Rouge, La.

KINGSTON MED. QUAR., CANADA.

Medical Associations (Editorial).

Examination of the Prepuce in Cases of Deferred Diagnosis, A. E. Barber, M. D., South Bend, Ind.

Clinical Demonstration in Operative Gynecology, Isaac Wood, M. D.

The Complications of Scarlet Fever and Their Treatment, J. W. Campbell, M. D., Kingston.

Tuberculosis Prophylaxis, E. Ryan, M. D.

Hay Fever, J. C. Connell, M. D.

Faces and Their Examination, W. T. Connell, M. D.

A Typical Operation for the Radical Cure of Oblique Inguinal Hernia, W. G. Anglin, M. D.

ST. LOUIS MED. GAZETTE. (10)

The Establishment of Sanatoria and the Tuberculosis Congress (Translated from the Berliner klinische Wochenschift by Sidney I. Schwab, M. D., St. Louis), Ferdinand Hueppe, Germany.

Infantile Paralysis (3d Paper), Charles G. Chaddock, M. D., Paris, France.

Amputation at Lower End of Thigh for Gangrene—Patient Recovers, Dr. Julius E. Griswold, Portland, Conn.

AM. JOUR. OF SURG. AND GYN., ST. LOUIS, JUNE.

Opthalmologic Surgery in the Country, with Special Reference to Acute Ulcer of the Cornea, John Fee, M. D., Oklamoma City, Okla.

Successful Removal of a Piece of Wood Imbedded in the Brain Thirty-Two Years, Without Impairing the Cerebral Functions—Removal of a Knife Blade in the Brain, Death, Z. H. Evans, M. D., Traverse City, Mich.

Electricity in Gynecological Practice, J. A. Gracey, M. D., L. R. C. P., Waxahachie, Texas.

Occlusion of Posterior Nares, with Report of Two Cases, J. Rule Fritts, M. D., Mexico, Mo.

Treatment of Congenital Talipes, Harriet E. Garrison, M. D., Dixon, Ill.

That First "Hysterectomy," R. E. Haughton, M. D., Richmond, Ind.

"Division of the Fee," from the Standpoint of the Country Doctor, Finis Purdue, M. D., Swinton, Mo.

Trouble with Vulvar Papillomata, H. D. Fair, M. D., Powers, Ind.

Three Abdominal Sections of the Same Woman in Five Years, the Second being Cæsarean Section, Mother and Child Both Living, Stewart W. Prior, M. D., Chester, S. C.

Treatment of Carbuncles, Milton P. Creel, M. D., Central City, Ky.

S. W. MED. REC. (JUNE), HOUSTON, TEX. (10)

Summer Complaints of Children, W. H. Allen, M. D., Marlin, Tex.

Diarrhœa of Infants, A. H. Schenk, M. D., Kenney, Texas.

BROOKLYN MED. JOUR. (20)

On Mental Suggestion and Charlatanism, P. Scott, M. D.

Diagnosis of Hip Disease, Charles D. Napier, A. B., M. D.

The History of a Case of Cut Throat, Henry Wallace, M. D.

Pelvic Abscess in Women, Alexander Rae, M. D.

GAILLARD'S MED. JOUR., NEW YORK. (50)

On the Care of the Skin in Its Connection with Physical Culture and Health, Dr. John Moir, L. R. C. P., L. R. C. S. (Edin.), London, Eng.

Clinical Data Relating to Cancer of the Uterus, Andrew F. Currier, M. D., New York.

A Clinical Lecture in Neurology, Harold N. Moyer, M. D., Chicago.

Two Cases of Peliosis Rheumatica, Charles J. Aldrich, M. D., Cleveland, Ohio.

Remarks on the Midwifery Question, Thomas J. Hillis, M. D., New York.

The Doctor Outside of Medicine, William L. Stowell, M. D.

MED. EXAM., NEW YORK. (20)

The Technique for the Detection of the Tubercle Bacillus in Sputum, as It Affects the Life Insurance Risk, Thomas C. Craig, M. D., Surgeon U. S. Navy (Retired), Brooklyn.

A Plea for Under-Graduate Instruction in Making Life Insurance Examinations, Brandreth Symonds, A. M., M. D., New York.

The Relation of Build (i. e. Height and Weight) to Longevity, George R. Shepherd, M. D., Hartford, Conn.

Selection, Appointment and Qualifications of Medical Examiners, Wm. B. Kibbey, M. D.

POST-GRADUATE, NEW YORK. (30)

The Diagnosis of Renal Tumors, Leonard Weber, M. D., New York.

Some Remarks on Gastric Ulcer, Especially on Its Cicatrization, Achilles Rose, M. D., New York.

MEMPHIS LANCET. (10)

The Galvano-Caustic Radical Treatment of Prostatic Hypertrophy, F. Kreissl, M. D., Chicago.

Vomiting in Pregnancy, G. G. Buford, M. D., Memphis.

Surgery of Strabismus, Charles H. Beard, M. D., Chicago.

Ludwig's Angina—with Report of Cases, Robert W. Tate, M. D., Bolivar, Tenn.

Post Hoc, Propter Hoc, W. J. Chenoweth, M. D., Decatur, Ill.

AM. JOUR. OF DERM. AND G.-U. DIS., ST. LOUIS. (25)

Two Cases of Primary Carcinoma of the Prostate, L. Bolton Bangs, M. D., New York City.

A Case of Ichthyosis Nigricans, A. H. Ohmann-Dumesnil, M. D., St. Louis.

Gummata and Chancre Redux, Henry G. Anthony, M. D., Chicago.

Urethritis—Gonorrhœa, F. G. Moehlau, M. D., Eddy, N. M.

A Case of Dermatitis Pilaris Capillitii, Isadore Dyer, M. D., New Orleans.

Combined Perineal and Suprapubic Cystotomy, Wm. P. Munn, M. D.

The Bottini Operation for Enlargement of the Prostate Gland, with Report of Case, Andrew J. Downs, A. M., M. D., Philadelphia.

A Few Remarks in Regard to the Treatment of Gonorrhœa, Edward J. Wynkoop, M. D., Syracuse, N. Y.

Venereal Warts in Ano, A. B. Middleton, B. S., M. D., Pontiac, Ill.

Treatment of Retention of Urine in Cases of Enlarged Prostate, H. M. Christian, M. D., Philadelphia.

Secondary Tuberculosis of the Skin, Walter U. Kennedy, M. D., St. Louis.

TEXAS MEDICAL JOURNAL, AUSTIN. (10)

Intestinal Perforations from Within by Foreign Bodies, by B. E. Hadra, M. D., San Antonio.

Some Tonsil Clippings, by R. S. Carroll, M. D., Calvert, Tex.

MED. REVIEW OF REVIEWS, NEW YORK. (10)

Gynæcological Surgery in Public Hospitals, Henry C. Coe, M. D., New York.

MEDICAL COUNCIL, PHILADELPHIA. (15)

Obstetrics and Gynecology in China, Charles E. Reed, M. D., Kang Hau, Canton, China.

Hypertrophied Tonsils, J. T. Anderson, M. D., Cornelia, Mo.

Surgery in the Region of the Western Plateau, H. A. Armstrong, M. D., East Las Vegas, N. M.

On the Change of Life in Women, A. H. P. Leuf, M. D., Philadelphia.

Some Experiments in the Use of Antitoxine in Diphtheria, W. S. Devine, M. D., Marshalltown, Iowa.

Some Common Diseases of the Ear, John R. Baer, M. D., Philadelphia.

K. C. MED. INDEX-LANCET. (10)

Empiricism in Missouri and How to Suppress It, E. L. Priest, M. D., Nevada, Mo.

Vasoco-Vaginal and Vasico-Uterine Fistula, H. E. Pearse, M. D., Kansas City.

MEDICAL MIRROR, ST. LOUIS. (10)

The Vagina, Byron Robinson, M. D., Chicago.

Grip, O. D. Fitzgerald, M. D., Los Angeles, Cal.

Report of a Case, Triplets, J. Louis Early, M. D., Knottsville, Ky.

Report of a Case of Cerebro-Spinal Meningitis, L. C. Royater, M. D., Henderson, Ky.

Deviations of the Nasal Septum and Its Operative Treatment, Wm. B. Shields, M. D., St. Louis.

Scarlatina, C. R. Day, M. D., Mayview, Mo.

BUFFALO MED. JOURNAL. (20)

A Plea for the Unification of Medical Societies, Z. J. Lusk, M. D., Warsaw, N. Y.

Prophylaxis in Obstetrical Practice, W. G. Taylor, M. D., Buffalo.

Relative Death Rates from Cancer and Consumption, John H. Pryor, M. D., Buffalo.

Relation of Medicine to Civilization, John O. Roe, M. D., Rochester, N. Y.

N. Y. MED. JOURNAL. JULY 1. (10).

Three Steps in the Tuberculous Process in Children, David Bovlard, Jr., M. D., N. Y.

Shadowgraphs of the Intestinal Villus of the Cat, J. W. Hartigan, A. M., M. D., F. R. M. S. (London), Morgantown, W. Va.

Comparative Test of Mixed-Fat Emulsion and Cod-Liver Oil, W. J. Mersereau, M. D., N. Y.

The Christian Scientists: What Shall We Do with Them? F. Julian Carroll, M. D., Summerville, S. C.

Excision of the Right Superior Cervical Ganglion of the Sympathetic for Glaucoma, with Report of Case and Review of Literature of the Surgery of the Cervical Ganglia, James Moore Ball, M. D., Edwin C. Renaud, M. D., and Willard Bartlett, A. M., all of St. Louis.

N. Y. MED. JOURNAL, JULY 8 (10)

Report of Three Cases of Multiple Pistol-Shot Wounds of the Intestine, George Woolsey, M. D., N. Y.

A Clinical Study of Twenty-four Cases of Paralysis Agitans, Joseph Collins, M. D., and L. J. J. Muskens, M. D., both of N. Y.

Ætiology of Texas Cattle Fever, with Special Reference to Recent Hypotheses Concerning the Transmission of Malaria, Theobald Smith, M. D., Boston.

Eudoxine in Pædiatric Practice, Gustavus M. Blech, A. B., M. D., Chicago.

The Doctor as a Carrier of Disease, John T. Howell, M. D., Newburgh, N. Y.

N. Y. MEDICAL JOURNAL, JULY 15. (10)

The Nature of the Xanthomata, S. Pollitzer, A. M., M. D., N. Y.

The Relation of Ophthalmology to General Medicine, G. Griffin Lewis, M. D., Syracuse, N. Y.

Some Aspects of Chronic Malarial Infection and their Treatment, W. H. Thomson, M. D., LL. D., N. Y.

Phthisis: Its Aetiology and Treatment, George D. Barney, M. D., Brooklyn.

The Term Appendicitis, etc., R. Ellis, M. D., Utica, N. Y.

Why Fumigation of Apartments Occupied by Tuberculous Patients at Health Resorts Should be under Municipal Control, Charles F. McGahan, M. D., Aiken, S. C.

N. Y. MEDICAL JOURNAL, JULY 22. (10)

A Study of Delirium, William Hirsch, M. D., N. Y.

The Importance of Early Diagnosis in Locomotor Ataxia, as Affected by the Newer Pathology, William Broaddus Pritchard, M. D., N. Y.

The Properties of Buffalo Lithia Water, John V. Shoemaker, M. D., LL. D., Philadelphia.

Remarks Based upon a Further Experience with Calomel in Diphtheria, L. D. Judd, M. D., Philadelphia.

The Administration of Atropine in Epilepsy, F. L. Wachenheim, M. D., N. Y.

N. Y. MEDICAL JOURNAL, JULY 29. (10)

Cerebral Abscess in a Child Three Months Old, Complicated by Erysipelas of the Head and Face—Operation—Recovery. Cursory Consideration of the Diagnostic Value of Symptoms, William J. Doyle, M. D., Philadelphia.

Modern Therapy of the Tympanic Cavity, M. A. Goldstein, M. D., St. Louis.

Anæsthesia: Nitrous Oxide; Ether; Chloroform, S. Ormond Goldan, M. D., N. Y.

Old Types of Disease, F. Savary Pearce, M. D., Philadelphia.

A Report of Two Cases of Typhoid Infection without any Intestinal Lesions, August Jerome Lartigau, M. D., Albany, N. Y.

The Early Recognition and Management of Malignant Disease of the Digestive System, Max Einhorn, M. D., N. Y.

MED. RECORD, N. Y., JULY 1. (10)

Notes on the Treatment of Yellow Fever with the Blood-Serum of the Bacillus Icteroides, and its Preparation, Charles B. Fitzpatrick, M. D., N. Y.

A Further Contribution to Exclusion of the Intestine, Frederick Kammerer, M. D., N. Y.

A Grooved Perineal Cannula to be Used as a Guide in Performing Perineal Sections in Cases of Urethral Obstructions, Ramon Guitrás, M. D., N. Y.

The Ill Effects of the Roentgen Rays as Demonstrated in a Case, Daisy M. Orleman, M. S., M. D., Peekskill, N. Y.

Cystoscopy and Urethral Catherization in Women, Edward N. Liell, M. D., Jacksonville, Fla.

How to Retain Your Grip on the Practice of Medicine, Sidney Davis, M. D., Milton, Pa.

Foreign Bodies in the Throat, Herbert J. Hopkins, M. D., C. M., Pittsburg.

A Case of Acromegaly, A. Hymanson, M. D., New York.

An Unique Case of Pityriasis Versicolor, William S. Gottheil, M. D., New York.

MED. RECORD, NEW YORK, JULY 8. (10)

Report of a Case of Alcoholic Multiple Neuritis, with Autopsy, J. H. Larkin, M. D., Ph. D., New York.

Notes on the Induction of Premature Labor, Henry C. Coe, M. D., New York.

Variations in Human Gait, E. H. Bradford, M. D. Boston.

MED. RECORD, NEW YORK, JULY 15. (10)

Some Points in the Symptomatology, Pathology and Treatment of Diseases of the Sinuses Adjacent and Secondary to the Orbit, Charles Stedman Bull, A. M., M. D., New York.

Some Remarks on Chronic Bright's Disease, Arthur R. Elliott, M. D., Chicago.

Preparing for the Knife in European Hospitals, J. Preston Miller, M. D., Washington, D. C.

The Relations of Cardiac Murmurs to the Events of the Normal Cardiac Cycle, Warren Coleman, M. D., New York.

Treatment of a Supposed "Kissing Bug" Wound,

followed by Prompt Recovery, F. A. Burrall, M. D., New York.

SO. MED. JOUR., LA GRANGE, N. S. (10)

Diagnosis of Bullet Wounds of the Intestines, Hugh M. Taylor, M. D., Richmond.

Etiologic Factors in Diseases Incident to the Second Summer of Childhood, and Treatment, R. H. Goodier, M. D., Hannibal, Mo.

DENTAL DIGEST, CHICAGO. (25)

Permanence of Replanted Teeth, A. P. Nicholson, D. D. S., Edgerton, Wis.

ST. PAUL MED. JOURNAL. (25)

Some of the Problems of Professional Life and Their Relation to Success in Practice, H. A. Tomlinson, M. D., St. Paul.

Ectopic Pregnancy, A. McLaren, M. D., St. Paul.

Catgut, Eduard Boeckmann, M. D., St. Paul.

MEDICAL BRIEF, ST. LOUIS. (10)

Senile Cataract, Gustavus Hartridge, F. R. C. S., London, Eng.

Shall the Specialist Pay a Commission to the General Practitioner? Emory Lanphear, M. D., Ph. D., LL. D., St. Louis.

Systemic Effects of Dentition, George M. Rice, M. D., Powersburg, Ky.

Malaria and Its Treatment, H. B. Williams, M. D., Kaufman, Texas.

Talipes Varus—Tarsectomy—Complete Recovery, with Full Correction of the Deformity, Wm. Davis Foster, M. D., Kansas City.

Impotency, J. L. Gilbert, M. D., Kendallville, Ind.

Antiseptic Obstetrical Practice, J. S. Leachman, M. D., Gallion, La.

The Ureters, Byron S. Robinson, B. S., M. D., Chicago.

Carbolic Acid in Diphtheria, J. W. Lockhart, St. John, Wash.

Epilepsy, T. A. Smurr, M. D., Ottawa, Ill.

Pneumonia, H. A. Simpson, M. D., Locust Spring, Tenn.

OCCIDENTAL MED. TIMES, SAN FRANCISCO, CAL. (20)

The Malarial Fevers of the Sacramento and San Joaquin Valleys, Phillip King Brown, M. D., San Francisco.

Sinus—Thrombosis—Cure Without Opening the Sinus, Robert Levy, M. D., Denver.

Cerebro-Spinal Meningitis, Three Cases—Death—Autopsy, S. J. Hunkin, M. D., San Francisco.

VA. MED. SEMI-MO., RICHMOND, JULY 7. (10)

Physiologic and Therapeutic Effects of Static Electricity, G. P. Edwards, M. D., Nashville, Tenn.

Peculiarities in Heart Affections in Children, Phillip F. Barbour, M. D., Louisville.

Diagnosis, C. F. Ulrich, A. M., M. D., Wheeling.

The Perineum—Its Injury and Repair, Edmond T. Baker, M. D., Richmond.

The Prevention and Treatment of Cancer of the Uterus, A. Lapthorn Smith, B. A., M. D., M. R. C. S. (Eng.), Montreal.

Permangate of Potassium Injections in the Treatment of Diarrhœa and Dysentery, together with Internal Antiseptics, Lucien Lofton, M. D., Emporia, Va.

Laminectomy—A plea for Its Employment in Serious Spinal Injuries, Hugh G. Nicholson, M. D., Paint Creek, Va.

VA. MED. SEMI-MO., RICHMOND, JULY 21. (10)

Quantitative Estimation of Albumin in the Urine, Chas. W. Purdy, M. D., Chicago.

Multiple Neuritis, Paralysis Agitans, Epilepsy—A Clinical Lecture, J. Allison Hodges, M. D., Richmond.

Surgical Complications of Typhoid Fever, Hugh M. Taylor, M. D., Richmond.

Succedaneum to Digitalis, W. R. Inge Dalton, M. D., New York.

Metaphysics, Henry C. Eyman, M. D., Cleveland.

Antitoxine in the Treatment of Diphtheria, Edwin L. Morgan, M. D., Washington, D. C.

S. W. MED. RECORD, HOUSTON, TEX. (10)

Acute Bright's Disease, Superinduced by Pregnancy, B. S. Ezell, M. D., Kosse, Texas.

Comatose Malaria, R. T. Morris, M. D., Houston.

AMERICAN MED. QUARTERLY, NEW YORK, JUNE. (75)

Disease in the Sygmoid Flexure, Joseph M. Mathews, M. D., LL. D., Louisville.

Some Facts Concerning the Treatment and Medical Complications of Typhoid Fever, Hobart A. Hare, M. D., Philadelphia.

Experiences in Intestinal Surgery, Matthew D. Mann, M. D., Buffalo.

Fat and Fecundity, a Study of the Cause, Pathology and Treatment of Sterility due to Obesity in Women, Charles A. L. Reed, M. D., Cincinnati.

On the Close Relation Between the Nasal and Cranial Cavities as a Cause of Brain Disease, William C. Krauss, M. D., Buffalo.

Hygiene of the Bedroom and Bedstead, Lawson Tait, F. R. C. S., M. D. (deceased).

Ointments and Pastes, Ernest Wends, M. D., Buffalo.

The Effects of Modern Small-Arm Projectiles, as Shown by the Wounded of the Fifth Army Corps During the Campaign in the Capture of Santiago de Cuba, Chas. B. Nancrede, A. M., M. D., LL. D., Ann Arbor, Mich.

The Correction of Nasal Deformities by Subcutaneous Operations, John O. Roe, M. D., Rochester, N. Y.

A Case of Elephantiasis of the Penis, George Henry Fox, M. D., New York.

Tuberculosis of the Urinary Tract, a Study of Thirty-four Cases, Albert Vander Veer, M. D., and Willis G. Macdonald, M. D., both of New York.

THE YOUNG GRADUATE...

I'm the equal of any,
Young "Saw-bones" proudly cried;
The image of Paracelsus
Is stamped upon my side:
I am as apt and cunning
As any doc. can be—
He needn't put on any airs
And think he's smart as me.

I'm every bit as good as they,
Young "Saw-bones" blustered loud;
The old, gray-haired doctors,
They needn't feel so proud;
For all their airs and graces
I do not give a fig;
My diploma is just as good as theirs,
And half again as big.

When this young man in the world
Went out upon his way,
Alas! the folks still held him cheap,
Whatever he might say.
The gray-haired doctor smiled. "You'll find,"
He said, "that par is par,
It doesn't matter how you boast,
But what you really are!"

—Ex.

There is an epidemic of measles in certain portions of England. In Liverpool twenty-three schools have been closed, most of them in the infant department only, but two of them wholly. Not many deaths, however, have occurred. The disease is said also to be quite prevalent in Manchester and Warrington. It is gratifying to know that the complaint is not of the virulent type.

Further decay in children's teeth may be prevented by applying nitrate of silver solution. An insoluble lime salt is formed in the tooth structure.

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HYDROGEN DIOXIDE, U. S. P.

"THE KIND THAT KEEPS."

A positive and harmless antiseptic and germicide for internal and external use.

Highly recommended in the treatment of diphtheria, scarlet fever, and other contagious diseases.

As a prophylactic in preventive medicine it is without a peer, and may be used lavishly or sparingly according to indications without a suspicion of harm resulting from its use in any application.

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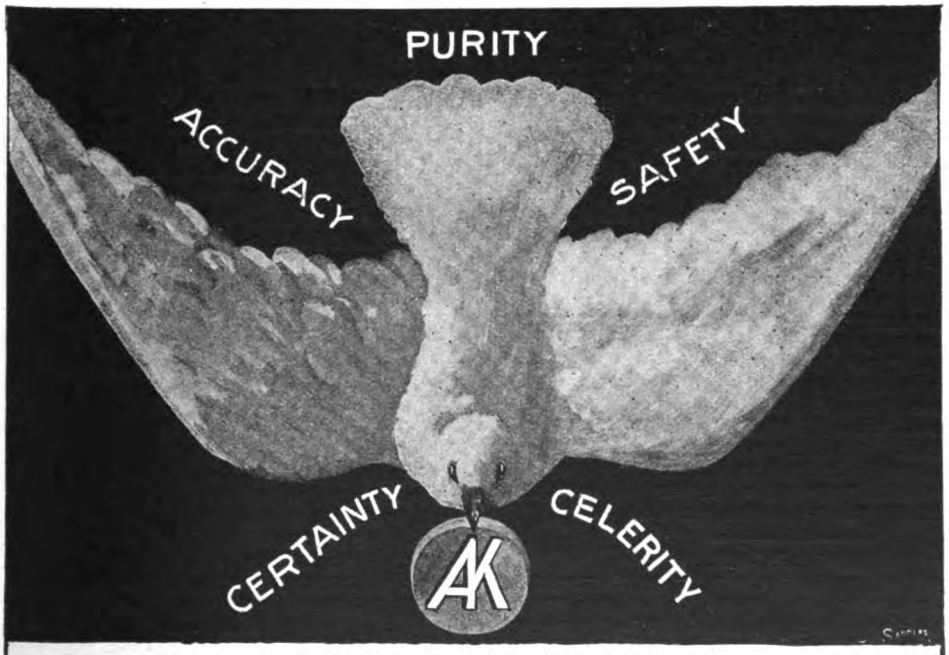

"That Gentlier on the Spirit Lies,
Than Tir'd Eyelids on Tir'd Eyes"

SAMPLES ON APPLICATION TO THE ANTIKAMNIA CHEMICAL CO., ST. LOUIS, U. S. A.

PUBLISHER'S DEPARTMENT.

Do you know the theory of reconstruction by the Hypophosphites of Lime and Soda? If not, read the advertisement of the McArthur Hypophosphite Co. and send for a pamphlet.

Dr. S. C. Martin, Professor of Dermatology and Hygiene, Barnes Medical College, St. Louis, Mo., writes:

After having tested Hagee's Cordial Cod-liver Oil Comp. in my practice for a number of years, the results have been so uniformly gratifying that I now rarely prescribe any other cod-liver oil preparation. The points in its favor are: 1st, the desired ingredients; 2d, their combination in a palatable and assimilable form, which insures a sufficiently prolonged use to produce substantial results.

UTRO-OVARIAN PAIN.

Prompt relief, unaccompanied by habit or untoward after-effect, is what the up-to-date practitioner desires most in these cases. If the pain is over the lower border of the liver, or lower part of the stomach, or, in short, be it headache, sideache, backache or pain of any other description caused by suppressed or irregular menstruation, it will yield to two five-grain tablets of Antikamnia. This dose may be repeated in an hour or two, if needed. For very prompt relief it is advisable to crush the tablets and swallow them with a little wine, diluted whisky or toddy.—Ohio Medical Journal.

ANEMIA.

As a consequent of mumps, Dr. David L. Field, of Jeffersonville, Indiana, writes concerning several cases of anemia in children who had suffered from mumps: In these children, there was no orchitis, or translation of the disease to any other organ, but the cases were attended with extreme langour and high temperature range. Nothing in the usual iron remedies gave relief for the anemia which followed upon these cases, and Dr. Field put them upon Henry's Three-Chlorides, a remedy which has never disappointed him in the treatment of anemia, from any cause. In these children, the remedy proved most happy, and very prompt, in doses of one-half to one teaspoonful in water or milk after meals.

WYETH'S LIQUID EXTRACT OF MALT.

Liquid Extract of Malt which, although liquid, is intended to supply certain elements of nutrition and to aid the adaptability of food in increasing the bodily weight and strength, should not be a stimulant, at least, not in an alcoholic sense. It should be an indirect means, or auxiliary, in increasing the efficacy of the ordinary food of our daily meals, or that of a prescribed diet in invalidism. Wyeth's Liquid Extract of Malt may, therefore, be regarded as a food and as a beverage only in the grateful palatability of its taste, purposely rendered slightly, though agreeably, bitter, through which its tonic property is much increased. Another advantage the Messrs. Wyeth claim for their Malt is, its small percentage of spirit, less than 3 per cent, with fourteen or fifteen per cent of nutritious, extractive matter.

SOLAR HEAT.

Direct exposure to the sun's rays; employment in or living in hot and poorly ventilated offices, workshops or rooms, are among the most prolific causes of headache in summertime, as well as of heat exhaustion and sunstroke. For these headaches and for the nausea which often accompanies them, antikamnia will be found to afford prompt relief and can be safely given. Insomnia from solar heat is readily overcome by one or two five-grain antikamnia tablets at supper time, and again before retiring. If these conditions are partly dependent upon a disordered stomach, two five-grain antikamnia tablets with fifteen or twenty drops of aromatic spirits of ammonia, well diluted, are advisable. For the pain following sun or heat stroke, antikamnia in doses of one or two tablets every two or three hours will produce the ease and rest necessary to complete recovery. As a preventive of and cure for nausea while traveling by railroad or steamboat, and for genuine mal de mer or seasickness, antikamnia is unsurpassed and is recommended by the surgeons of the White Star, Cunard and American Steamship lines.

HERNIA.

Strangulated hernia in children is of far more frequent occurrence than generally supposed. There is an old-fashioned idea that a child under one year should not wear a truss—and this is the cause of numerous deaths. A pad should be fitted to every infantile rupture as soon as discovered. If this does not hold the gut back, a truss should be made as soon as it is found the hernia will not remain reduced. By a proper truss a large proportion of such hernia will be perfectly cured by the third year.

Most cures are found to follow the use of Seeley's Hard Rubber Trusses. They hold the parts in their natural positions, assisting the natural development of the child to outgrow tne rupture. The manufacturers, Chesterman & Streeter, Philadelphia, are practical skilled truss fitters, and will send catalogue and life plates to those who write for them.

MALTINE WITH CREOSOTE.

Each fluid ounce contains four minims of pure Creosote. Among the more recent remedies Creosote has proven of the utmost value in the treatment of tuberculosis in its various forms, especially pulmonary, and in septic conditions of the alimentary canal as exhibited in different forms of diarrhœa. By its antiseptic properties it counteracts the tonic influence of tubercle bacilli, destroys bacilli of a less virulent type, and increases nutrition by stimulating metabolic activity. Its combination with Maltine has proved exceptionally serviceable in supplying a highly nutritious element, disguising the disagreeable taste, and completely removing the tendency of creosote to produce gastric irritation; in fact, PURE creosote, such as is used in this combination, causes little or no irritation in the alimentary canal even when taken alone.

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The attention of physicians and others is directed to The Winkley Artificial Limb Company, whose advertisement appears on the front title page. We feel warranted in bespeaking for this company the confidence and patronage of all in need of their services, as manufacturers of artificial limbs. They have had years of experience and success. The growth of this company has been quite phenomenal, starting in business some twelve years ago in a small way, their business has increased from year to year until today the are the largest manufacturer of artificial limbs in the world, furnishing patrons not only throughout the United States, Canada and Mexico, but even across the water, and any one interested in the subject, upon application will be sent their large illustrated descriptive catalogue, and any desired information upon the subject will gladly be given. You will find this company thoroughly responsible and reliable in every way.

SIGHT-SEER'S HEADACHE.

There are, no doubt, very many important uses for antikamnia, of which physicians as a rule may be uninformed. A five-grain antikamnia tablet prescribed for patients before starting on an outing, and this includes tourists, picknickers, bicyclers, and in fact, anybody who is out in the sun and air all

day, will entirely prevent that demoralizing headache which frequently mars the pleasure of such an occasion. This applies equally to women on shopping tours, and especially to those who invariably come home cross and out of sorts, with a wretched "sight-seer's headache." The nervous headache and irritable condition of the busy business man is prevented by the timely use of a ten-grain dose. Every bicycle rider, after a hard run, should take two five-grain tablets on going to bed. In the morning he will awake minus the usual muscular pains, aches and soreness. As a cure and preventive of the pains peculiar to women at time of period, antikamnia is unequalled and unaccompanied by habit or unpleasant after-effect. If the pain is over the lower border of the liver, or lower part of the stomach, or in short, be it headache, sideache, backache, or pain of any other description caused by suppressed or irregular menstruation, it will yield to two five-grain tablets. This dose may be repeated in an hour or two, if needed.

AN IMPORTANT OBSERVATION.

Prof. Burney Yeo, of London, states in his latest work on Clinical Therapeutics, that many of the common forms of diarrhœa are accompanied by excessive acidity of the intestinal contents, and that they may be promptly cured by antacid remedies without the use of astringents.

These forms of diarrhœa are associated with the induce intestinal fermentation and consequent local growth and multiplication of micro-organisms which irritation from decomposing food products.

The therapeutic indications in these cases are clear, viz: check intestinal fermentation, neutralize acidity, and overcome the existing atonicity and catarrhal inflammation of the intestinal mucous membrane. Lauder Brunton speaks highly of the use of glycerine as an intestinal antiseptic. In combination with digestive tonic alteratives and antacids, as it is in Gray's Glycerine Tonic Comp. it fulfils all the existing indications and moreover promotes the digestion and assimilation of food so that the normal nutritive processes are speedily re-established. It is of particular value in diarrhœa occurring in people of impaired vitality, as it not only cures the intestinal disturbances but it also restores tone to the enfeebled system.

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A great desideratum in the medical practice is an ideal tissue builder. The busy practitioner frequently finds himself at a loss to decide upon the most efficient remedy for a given case, in spite of the great variety of drugs from which he may select. This is especially true in cases where tissue changes and waste are continuous, and where it is necessary to check the disintegration and repair and restore the waste of cellular tissue, resulting from established cachexias. In these cases remedies are required both for their antidotal properties and their food values. Under these circumstances that remedy which most nearly meets the requirements of the case is of most value.

I am rarely constrained to lend my indorsement to any proprietary remedy, though admitting, in a general way, that many of them are excellent for the treatment of diseases for which they are recommended. But I have found in the use of Cord. Ol. Morrhuæ Comp. (Hagee) such marked benefit that I feel justified in calling the attention of the profession to its merits, both as a medicine and tissue builder. Its elegance and excellence as a pharmaceutical product, the ease with which it is assimilated, its retention by the most delicate stomachs, all make it desirable for exhibition in cases where the principal indication is to guard the patient's stomach. Used in anæmic conditions associated with chlorosis when the catamenia are slow in asserting themselves or dysmenorrhea exists on account of a deficiency of red blood corpuscles, or in cases of menorrhagia requiring the use of a tonic, I have secured excellent results, and have seen patients rapidly relieved of untoward symptoms, while in debilitated conditions following typhoid fever, when convalescence is slow, the effects of the remedy are all that can be desired. During convalescence from pneumonia, when resolution is slow, and the normal respiratory murmur is not rapidly established, I know of no better remedy. I have used it satisfactorily with children, recovering from summer diarrhoea, in connection with milk or some of the most desirable baby foods upon the market.

In the primary stages of phthisis pulmonalis I have confidence in its curative powers, while it has proved of advantage in my hands in all stages of the disease. It is particularly in those cases when the stomach becomes so rebellious and so intolerant of medication that I have found this remedy well borne and beneficial to the sufferer. I could cite many cases in which I have used the Cordial, but will only subjoin one for the consideration of the profession:

M. H., female, white, age 16, American, tall, slim, slightly cachectic, poorly developed, general health below normal, suffers from amenorrhea, has some cough, mammary glands undeveloped, pulse 90, elevation of temperature one-half degree above normal, no expectoration with cough, no sinking of tissues above clavicle, slight dullness on percussion in apices of both lungs, auscultation reveals dry valves in apices of both lungs, slight hoarseness. History shows that menses appeared at fourteen and were regular for three or four months, though scanty and painful, then ceased and had not reappeared up to present date. Prescribed Cord. Ol. Morrhuæ Comp. (Hagee), teaspoonful four times per day, tinct. ferri chlorid ten drops three times per day, and occasional hot hip baths. The menstrual flow was reestablished in two months and recovery was rapid and uneventful. At this time the patient is in excellent health and has had no tendency to relapse to her former condition.

N. M. Baskett, M. D.

Moberly, Mo.

THE NEW MALTINE COMBINATION.

The study of infectious disease received a new impetus and was placed upon a new basis when the agency of bacteria in its production was discovered. The efforts of clinicians were then directed to the influence of remedies upon the parasitic and living causes of disease. The great desideratum was to find substances having the power either to destroy microbes or to neutralize the noxious products which they elaborate. In the course of such experimental studies, however, we were led to realize more forcibly than ever before the resistant powers of the human organism. It was learned that it is not the mere presence of bacteria within the body that is the most significant fact, but their germination, reproduction, and cultivation, and, above all, the poisonous products by which the infection of blood and tissues is accomplished. Thereafter the fortification of the organism acquired fresh importance. The attention of physicians was directed not only to the destruction of micro-organisms and the neutralization of their poisons, or toxins, but also to the assistance of the tissues in their struggle against the invaders.

As long as, by any and every means, general nutrition can be maintained at the normal standard there is little to be feared from the presence of pathogenic bacteria. If, however, the general vitality be reduced by any cause, our diminutive foes can then not only enter, but can contaminate the system.

These discoveries have thrown new light upon the operation of many medicinal substances, and

have served to direct our energies to the support of the threatened organs and tissues. A nutritious principle which is so influential in promoting the digestion of one of the great food-groups—viz: the carbohydrates—has a wide range of applicability. It adds to the nourishment of the feeble. It restores digestive power and physical energy to those who have been notably reduced by a lingering illness. It promotes the healthy growth of muscular structures and strengthens the functions of secreting glands.

Accordingly, skillfully prepared and reliable preparations like those of The Maltine Company, have long been favorably known to and beneficially employed by physicians in the large class of morbid conditions in which they are indicated. Several active remedies or combination of remedies have from time to time been added to the plain Maltine in order to adapt it to a wider field of usefulness. The latest of these excellent additions to a worthy line of products is Maltine with Creosote.

In the purely medicinal, as distinguished from the climatic treatment of tuberculosis, creosote has approved itself as a remedy of the first rank. It undoubtedly possesses a considerable inhibitory influence over the development of the bacillus tuberculosis. It relieves the prominent symptoms of phthisis more effectually than any other remedy. Creosote is often able to hold this destructive malady in abeyance for an indefinite period or practically cure the disease. Therefore a combination of Maltine with Creosote appeals most powerfully to the medical profession. So much of the physician's work has to do with tuberculosis in its varied manifestations and localizations that a warm welcome will doubtless be extended to this new preparation. Its nutrient and antiseptic properties render it admirably adapted to fulfill many important indications. We are assured that the creosote contained in this preparation is perfectly pure, and we have learned by painful experience that there is a vast difference between pure and impure creosote. Each fluid ounce of Maltine with Creosote contains 4 minims of pure creosote. Creosote is an efficient remedy in many morbid conditions of the intestinal tract, and this new combination will, consequently, be found of service in many cases of chronic indigestion.—The Monthly Cyclopædia of Practical Medicine, Philadelphia, June, 1899.

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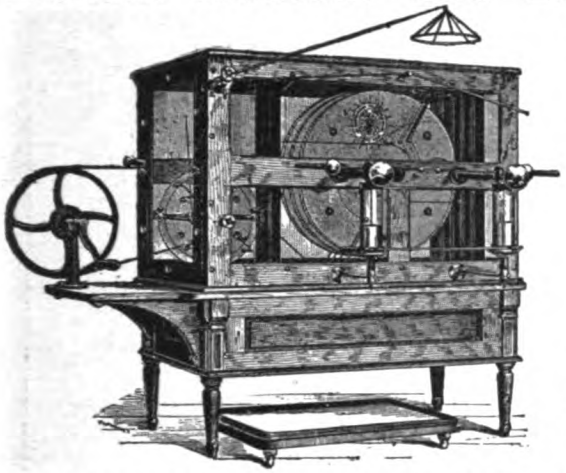

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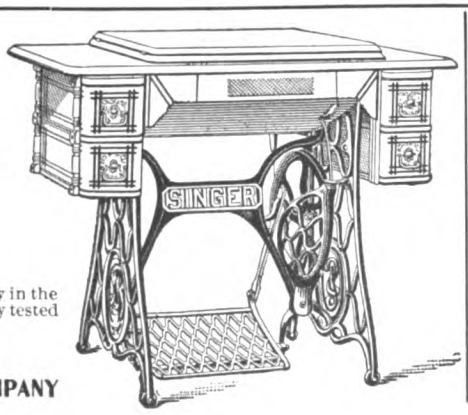

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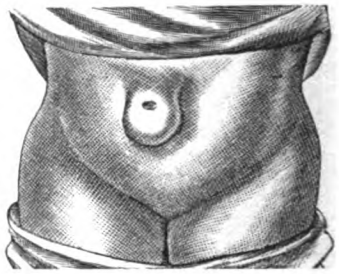

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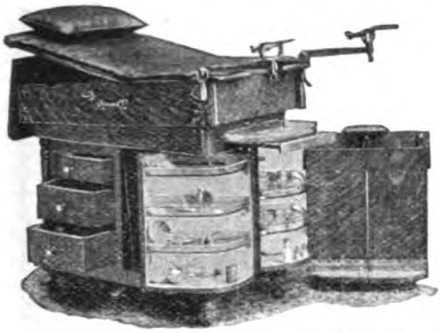

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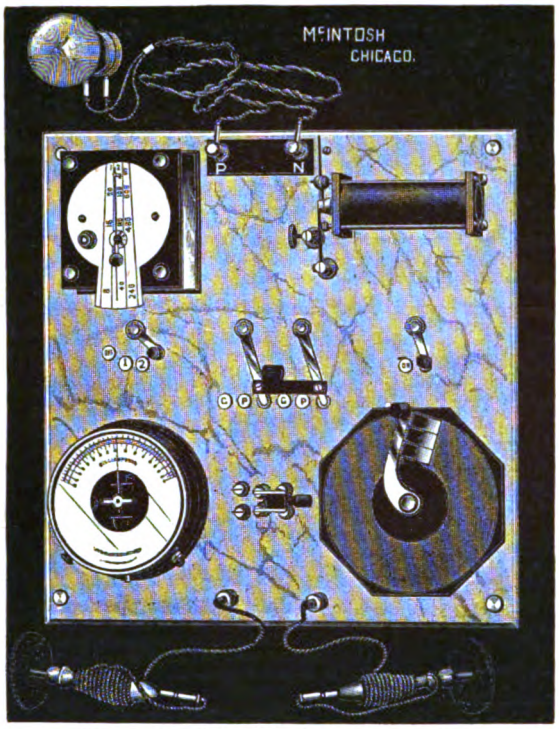

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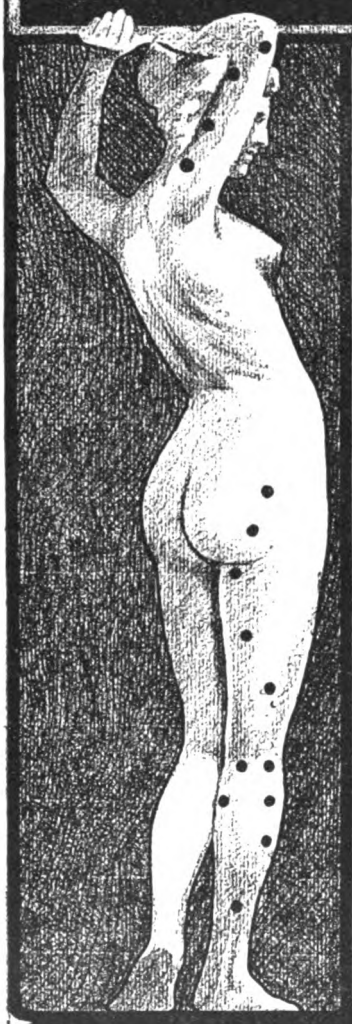

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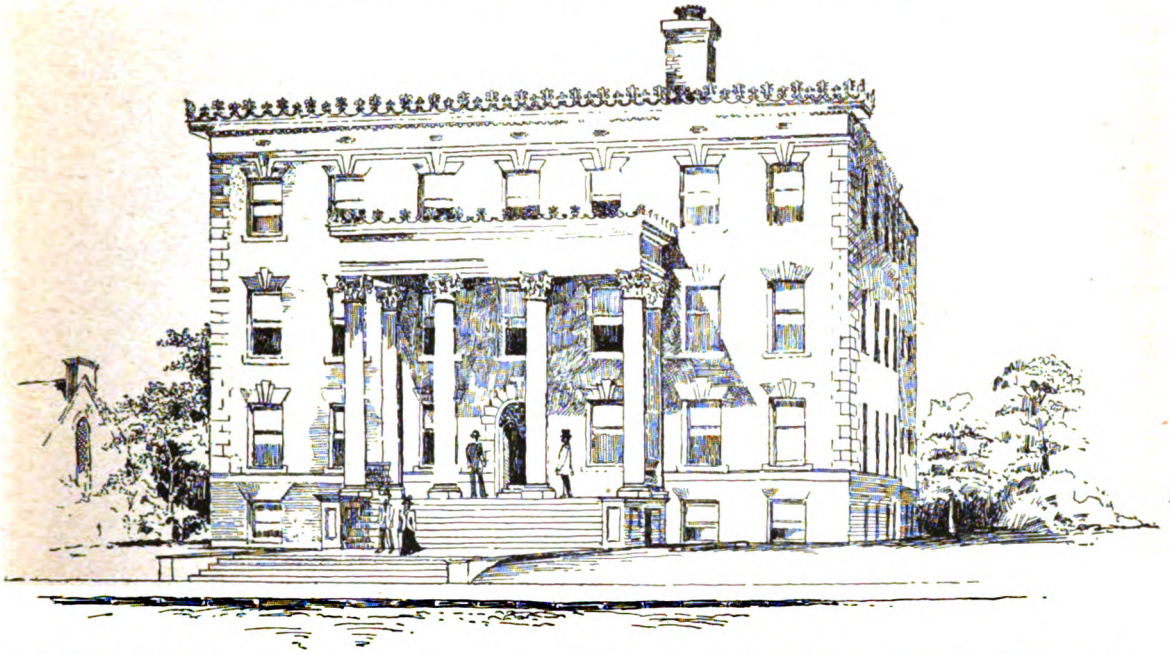

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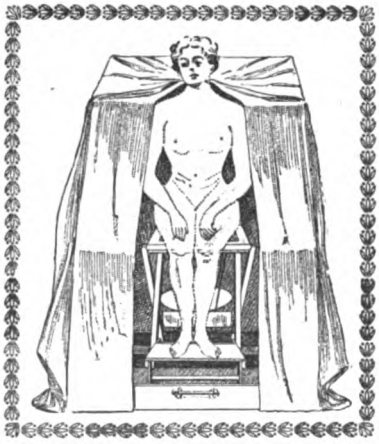

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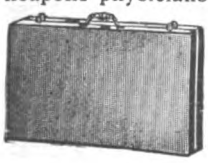

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THE MEDICAL DIAL

A Monthly Record of Medicine and Surgery.

Vol. I. MINNEAPOLIS, SEPTEMBER, 1899. No. 10.

Original Articles.

THE VALUE OF A LEUCOCYTE COUNT IN APPENDICITIS.

By Geo. Douglas Head, M. D.,
Instructor in Pathology, University of Minnesota.

The value of a leucocyte count in appendicitis is, first, as an aid in the diagnosis of the disease; second, as a means of determining the character of the inflammation, whether catarrhal or suppurative; and, third, as a help to the clinician in following the course of the appendicitis from day to day, of determining whether the inflammatory process is extending and involving new areas or receding and going on to resolution.

AS AN AID IN THE DIAGNOSIS

Of appendicitis the counting of the white cells of the blood is of greatest value. Appendicitis may be confounded with typhoid fever, gall-stone or renal colic, intestinal obstruction, acute gastritis, attacks of uraemia, stercoral caecitis, local peritonitis from perforating ulcer of the bowel or stomach, floating kidney, pelvic peritonitis, ovaritis, salpingitis, ovarian neuralgia, or extra uterine pregnancy.

Between appendicitis and uncomplicated typhoid fever the white count is almost diagnostic. The leucocyte count in appendicitis is almost without exception increased while that of typhoid fever is normal or diminished. In two cases in the writer's experience where the diagnosis lay between appendicitis and typhoid fever operation verified the blood diagnosis.

Between appendicitis and gall-stone or renal colic the leucocyte count assists in the diagnosis. In appendicitis the white blood count is increased; in gall-stone or renal colic, if no septic or inflammatory disturbances accompany the passage of the stone, the leucocyte count is normal.

Between appendicitis and intestinal obstruction the count assists the diagnostician. When doubt exists between the two conditions a leucocytosis points toward appendicitis, though it must be noted that some cases of acute obstruction of long standing, where necrosis of the gut has taken place, show leucocytosis, as also cases of obstruction from cancer of the bowel. (Cabot), p. 245. The writer has counted the leucocytes of the blood in one case where there was a doubt as to whether appendicitis or acute intestinal obstruction existed. The operation verified the blood findings.

Between appendicitis and acute gastritis a white blood count is of no aid in diagnosis. Both conditions being characterized by leucocytosis.

Appendicitis may be confounded with attacks of uraemia, exhibiting well marked abdominal symptoms. But the white count is of uncertain value in differentiating between these two conditions as uraemia is often accompanied by leucocytosis. An examination of the urine never leaves the clinician in doubt.

Stercoral caecitis may be confounded with appendicitis. In such a dilemma the white count is of importance as leucocytosis is rarely met with in the former condition.

Between appendicitis and floating kidney a leucocyte count is of diagnostic importance. Floating kidney has a normal count, appendicitis a leucocytosis.

Between appendicitis and pelvic peritonitis; appendicitis and ovaritis or salpingitis; appendicitis and peritonitis from perforation of stomach or bowel—the leucocyte count is of no diagnostic value.

Neither can the white count differentiate between appendicitis and extra uterine preg-

*Rea d before the Minnesota State Medical Society.

nancy. Cabot states that between appendicitis and ovarian neuralgia the white count is of diagnostic importance, as the latter condition is not accompanied by an increase in the white cells of the blood.

AS A MEANS OF DETERMINING CHARACTER OF INFLAMMATION.

In the second place, a leucocyte count is of value in determining the character of the inflammation.

When a medical man sees for the first time a case of appendicitis he desires to know what pathological state exists in or around the appendix. Is the inflammation catarrhal or has pus formed? Has perforation of the appendix taken place? If perforation has not taken place, is the appendix necrotic and perforation about to take place? If pus has formed, is it well walled off or has the general peritoneum been infected?

The white count can determine between an appendicitis which is suppurative and one which is catarrhal in a large percentage of cases. In coming to this conclusion we accept in evidence only those cases of appendicitis in which a white count has been made and an operation immediately, or within a few hours, performed.

Of cases counted, in which pus was found at operation, Cabot reports eighteen cases, the writer seven, making a total of twenty-five cases. Of this number four per cent. record a white blood count below 14,000.

Case.	White count.	
I.	10,300	oper. pus evacuated ... Cabot
II.	9,000	oper. pus evacuated ... Cabot
III.	10,040	oper. pus evacuated ....Cabot
IV.	11,000	oper. pus evacuated .... Head

Of the cases counted and operated upon, in which a catarrhal appendix was found at operation, Cabot reports six cases, the writer has record of three, making a total of nine cases. In none of these did the count exceed 14,000 leucocytes.

From these statistics we can draw the following conclusions: All cases of appendicitis with a white count of over 14,000 are suppurative in character. No cases of catarrhal appendicitis have a count of over 14,000 luecocytes. The leucocyte count can determine the presence of pus in 80 per cent. of the cases in which pus is present.

The leucocyte count can determine between a catarrhal and a suppurative appendicitis in 86 per cent. of the cases. In 14 per cent. of the cases it fails to distinguish between a catarrhal and a suppurative appendicitis. The writer is of the opinion that the number of cases upon which these conclusions are based is too small to state the exact truth.

Can the leucocyte count give any information as to whether perforation of the appendix is about to take place?

The writer offers two cases in evidence—in one, a count of 8,000 white cells was made, and 24 hours after the count, the abdomen was opened and a perforated appendix with some purulent fluid was encountered; and in the second case, a count of 11,000 was made, and 36 hours after, a perforated appendix, with a few c.c. of pus surrounding, was removed. In neither case was there clinical evidence of perforation at the time the white count was made. From the history of these two cases it is probable that the white blood count can give us no means of determining between an appendix suffering from a simple catarrhal inflammation and one which is about to perforate.

It is to be regretted that leucocyte counts nearer to the time of operation had not been made in both these cases.

Can the leucocyte count indicate whether an appendix is necrotic or gangrenous? Cabot reports two cases which seem to bear upon this point—in one a count of 12,000 was made, operation performed, and a gangrenous appendix encountered; and in the other a count of 9,000 leucocytes was recorded, operation was performed and a gangrenous appendix with a general suppurative peritonitis was met with. As both of these counts border closely upon those of catarrhal appendicitis, it would seem that the leucocyte count is of no value in discriminating between a catarrhal and a gangrenous appendix.

In this connection there comes the question of the fate of those cases of appendicitis in which leucocyte counts are made but on which no operations are performed, and of cases giving clinical histories of appendicitis in which white counts were made, but the patients left to nature to cure. The writer has records of eleven cases with leucocyte counts as follows:

Case.	Clin. Diagnosis.	Highest White Count.	Recov. from attack without operat'n.
I.	Appendicitis	30,000	Yes.
II.	Appendicitis	10,000	Yes.
III.	Appendicitis	21,000	Yes.
IV.	Appendicitis	7,000	Yes.
V.	Appendicitis	22,000	Yes.
VI.	Appendicitis	7,000	Yes.
VII.	Appendicitis	14,000	Yes.
VIII.	Appendicitis	16,200	Yes.
IX.	Appendicitis	17,200	Yes.
X.	Appendicitis	10,300	Yes.
XI.	Appendicitis	23,000	Yes.

From the above records it is plainly shown that the leucocyte count may be exceedingly high and yet the patient will recover from the attack without operation.

We can also conclude that the white count, beyond which recovery without operative interference is impossible, can not be definitely fixed, and that many cases in which the appendicitis is septic in character, recover without operation. In the writer's series, six cases had a count of 16,000 or more leucocytes.

AS AN INTERPRETER OF THE COURSE OF THE INFLAMMATION.

In the third place the white blood count is of great value in interpreting the course of the inflammation, an increasing leucocytosis meaning an advancing process, and a decreasing white count, a receding of the inflammation and progress toward resolution or inflammatory localization.

As an illustration of the value of the procedure in following the course of the inflammation take care R. of the writer's series:

Young man, 21 years, seized with pain in the right lower abdomen, coming on after violent exercise, Temp. 103°, pulse 110, bowels constipated, in the right lower abdomen near McBurney's point a palpable swelling elongated and tender to touch:

Date.	White count.	Clinical notes.
Oct. 1, a. m.	9,000	Patient in pain and restless.
Oct. 1, p. m.	12,600	Pain in abdomen more severe; some nausea; no bowel movement.
Oct. 2, a. m.	11,000	No change in symptoms.
Oct. 2, p. m.	16,200	Patient restless; bowels moved by enema; swelling in abdomen more pronounced and tender.
Oct. 3, a. m.	13,200	Passed a bad night; Temp. 102.5°; no change in symptoms.
Oct. 3, p. m.	13,700	Clinical symptoms same.
Oct. 4, a. m.	11,200	Patient no better; swelling not so tender; Temp. 101°.
Oct. 4, p. m.	13,300	Condition same.
Oct. 5, a. m.	8,500	Bowels moved; patient much improved; passed a good night.
Oct. 6, a. m.	7,660	Convalescence.
Oct. 7, a. m.	5,000	Swelling in abdomen disappearing.
Oct. 8, a. m.	4,660	Dismissed.

In this case the count gave a means of following the inflammation from day to day and ascertaining whether the process was increasing and an abscess forming; or whether the inflammation was receding and going on to resolution.

In that well defined class of cases where the temperature is low and the general clinical symptoms give little evidence as to the course the disease is pursuing, the leucocyte count is a valuable aid to the clinician. As an illustration take case T. of author's series: Child T., girl, six years, well nourished and with no suggestive history. Seized with pain in right lower abdomen, with vomiting, constipation, and Temp. of 101°. On palpation child cries out when right lower abdomen is examined. All other symptoms negative; diagnosis, appendicitis.

Date.	White Count.	Clinical notes.
Jan. 15, p. m.	30,000	
Jan. 16, a. m.	18,300	No change in symptoms; Temp. 101°; bowels moved.
Jan. 16, p. m.	14,000	No change except vomiting ceased.
Jan. 17, a. m.	14,000	Child better; Temp. 99.2°.
Jan. 18, a. m.	8,000	Child better; Temp. 99.4°; pain in right side not complained of; bowels moved.
Jan. 21, a. m.	12,000	Convalescence.
Feb. 3,	3,000	

In this case the leucocyte count gave a means of determining the course of the dis-

ease, which was not revealed by a study of the clinical symptoms.

Another case illustrative of the value of the successive counts is case III: Young man, 25 years, student U. of M., history of one day's pain in right lower abdomen, vomiting, constipation, and tenderness over appendix on palpation, Temp. 99.5°.

Date.	White Count.	Clinical notes.
May 8, noon	16,000	Patient in great pain.
May 8, p. m.	17,200	No change in symptoms; marked pain on pressure over McB.'s point; no palpable tumor.
May 9, a. m.	9,000	Patient better.
May 9, p. m.	7,700	Patient better; Temp. normal.
May 10, a. m.	4,500	Patient better; dismissed.

In this case the white count was a correct guide to the course of the inflammation. On the other hand the count often times, instead of receding steadily, increases even when there is no change in the clinical symptoms.

See case 40, Cabot, p. 199: Patient enters with vomiting and localized pain and tenderness in the right abdomen. The first count gave 15,600; three days later it was 22,900, when the patient seemed better and improving; the following day it was 35,300, when the bowels moved and the patient had no fever, yet the white count plainly indicated a severe septic infection. The surgeon was finally persuaded to operate and a large amount of pus was evacuated.

So far as the author's experience goes he has always found the white count a safe guide as to the course the inflammation is pursuing, when the counts could be made from the beginning of the disease.

As has before been stated a certain small percentage of cases of appendicitis, where pus has formed or the appendix has become necrotic, are marked by a low leucocyte count. When dealing with such cases the white count might lead the diagnostician into error. In the large majority of cases a gradually decreasing leucocytosis means a favorable turn of events and ultimate recovery from the attack; while a gradually increasing leucocytosis indicates a spreading of the inflammatory process and an increase in the gravity of the situation.

The white blood count is of no value in determining the presence of a general suppurative peritonitis, for in some of the cases the leucocyte counts are high; in others low.

Cabot reports four cases of general purulent peritonitis with no leucocytosis. The writer has records of two cases—in one a count of 14,000; in the other a count of 20,000 was made.

In dealing with appendicitis in general practice, the writer has found the white blood count of value under the following conditions:

TABLE OF CASES OF APPENDICITIS WITH LEUCOCYTE COUNT.

No. of Case.	Name.	Age.	Clin. Diagnosis	Count.	Result.
1	Stephen S.	21	Catharrhal appendicitis.	7,000	*Recovery, no operation.
2	John C . .	11	Appendicitis .	19,000 14,000 22,000 14,000	Recovery, no operation.
3	Mrs. P . .	45	Appendicitis .	5,200	Operation, catarrhal appendix.
4	Dr. C . . .	35	Appendicitis .	8,000	Operation, 36 hours later necrotic appendix and pus.
5	Lon. B . .	12	Appendicitis, with pus . .	22,600	Operation, 25 c c pus evacuated.
6	Jennie C .	8	Appendicitis .	9,200 11,000	Recovery, no operation.
7	Mr. F . . .	27	Appendicitis .	7,000	Recovery, no operation.
8	Mr. A . . .	23	Appendicitis, or typh. fever	36,000	Operation, 20 c c evacuated.
9	Mr. K . .	40	Chronic catarrhal appnd's	7,800	Operation, thickened appendix.
10	Mr. J . . .	30	Appendicitis .	14,000	Recovery, no operation.
11	Mr. J . . .	23	Appendicitis .	9,000 16,200 13,200 11,200 6,500 5,000	Recovery, no operation.
12	Mr. R . . .	42	Appendicitis .	11,000	Operation, 36 hours later perforation of appendix and pus.
13	Mr. W . .	24	Appendicitis .	16,000 17,200 9,000	Recovery, no operation.
14	Mr. T . . .	20	Appendicitis .	10,300	Recovery, no operation.
15	Boy, D . .	10	Appendicitis, with pus . .	16,000	Operation and pus evacuated.
16	Mrs. C . .	30	Appendicitis .	23,000	Recovery, no operation.
17	Mrs. S . .	60	Appendicitis .	13,500 17,000	Pus discharged by bowel.
18	Ruth T . .	6	Appendicitis .	30,000 18,300 14,000 8,000 12,000 3,000	Recovery, no operation.
19	Mrs. B . .	30	Appendicitis .	19,300	Operation, pus evacuated.
20	Mr. R . . .	22	Intestinal obstruction or appendicitis.	20,000	Operation, gangrenous appendix and general peritonitis.
21	Jennie Mc.	18	Catarrhal appendicitis. .	10,000	Recovery, no operation.
22	Pat'nt, Dr. S	. .	Appendicitis, with abscess.	11,000	Operation, pus evacuated.
23	Mr. C . . .	26	Appendicitis, or (?)	11,500	Operation, no pus, thickened appendix.
24	Mr. S . . .	28	Appendicitis .	14,000	Operation, pus and perforated appendix, general peritonitis.
25	Girl, T . .	6	Appendicitis .	21,000 19,000	Recovery, no operation.

*Recovery—Recovery from attack.

First, where doubt existed as to the diagnosis between appendicitis and diseases which simulate its symptoms, but cause no leucocytosis.

Second, where the diagnostician was uncertain whether pus was present, in or about the appendix.

Third, where the clinical symptoms mystified the clinician and gave him no clue as to the course the inflammation was pursuing.

As the value of many of these laboratory methods in clinical medicine can only be determined by the study of a large series of cases, it is important that every observer should record his results.

The writer has therefore appended to this paper a tabulated list of his cases and the leucocyte counts, with such clinical or operative notes as were important. The method of making the count is as follows:

A Thoma Zeiss haemocytometer and a bottle of one-third per cent. glacial acetic acid are carried in the hand satchel. When a case is met with, where a leucocyte count is desired, the mixer of the haemocytometer is washed out, the ear is pricked and a small amount of blood drawn up into the capillary tube to the point marked 1. Acetic acid solution is then drawn into the mixer to the point marked 101. The mixer is then thoroughly shaken, put into the case and carried to the office where the count is made. To one who is accustomed to the work ten minutes time will complete the procedure, filling the mixer and making the count.

SOME ABUSES IN NASAL SURGERY.

By W. S. Laton, M. D., Minneapolis.

Professor Diseases Throat and Nose in the University of Minnesota. Member Minnesota Academy of Medicine and American Medical Association.

In discussing this subject of abuses in nasal surgery, I have no desire to criticise the surgical methods adopted by many of my worthy confreres, or to decry in any possible way the necessity for many such procedures. Yet, I feel sure that the review of half a dozen cases that have come under my observation during the year just past, showing the results of over-zealous and enthusiastic operators, cannot help but convince many of you that careful and conservative measures are quite as appropriate here as in other departments of surgery.

While admitting the importance and necessity for many of these operations, I should as strongly condemn as unwise and imprudent the almost disastrous extent to which many of them are carried. You will readily perceive the wisdom of this criticism as we proceed, and you consider that all the abnormal conditions included in this discussion are of a non-recurring and non-malignant character. It is certainly apparent to you all that there is a broad middle ground between the ultra-conservative practitioner who believes in non-surgical interference, depending almost entirely upon local therapeutic measures, and the ambitious radical extremist who seizes all the bone, cartilage and connective tissue, whether innocent or otherwise, that has the hardihood to show the least prominence between the anterior nares and the vault of the pharynx. It will be my endeavor in this short paper to show the utter futility of the one, and to point out some of the dangers and serious consequences, of the other.

It is not an unusual occurrence with many of us, who are limiting our practice to the diseases in question, to meet simple cases that have been under treatment for months, and often years, where a resort has only been made to the use of douches and sprays, never affording more than temporary relief, and in many instances aggravating the difficulty rather than relieving it. Especially is this true if the solutions used are of an irritating character, as they then invite an additional blood supply to the part, which produces a dilatation of the blood vessels, and in time results in the consequent deposit of connective tissue. It is in such cases that a proper conception of the diagnosis and pathological conditions should suggest intelligent and rational treatment, which would be of inestimable benefit to the patient, and the greatest satisfaction to the attendant.

I will now review the record of a few typical cases to better illustrate and emphasize the meaning I wish to convey, and, at the same time, indicate in a way the chagrin and embarrassment many of us would experience were we present when some lucky fellow dis-

*Read before the Minnesota State Medical Society.

covers the inexcusable errors in our judgment and work:

CASE 1.

A. C. W. Male. Aged 32. Book-keeper in Minnesota for ten years. General health always good, except for the persistent and almost incessant blocking up of the nasal cavities, particularly when in a recumbent position. This condition continued in spite of more than five years treatments with the most approved douches, sprays, and repeated applications of the cautery. Nothing ever seemed to afford hardly temporary relief. There was ever present a greenish, fetid discharge, which formed crusts, and were removed with difficulty, and for a year or more there was a constant ringing in the ears with apparent dullness of hearing. He consulted me April 4th of this year, not for treatment, but rather for advice concerning a suitable climate to which he could go for relief from his distressing condition. When an examination was suggested, he strenuously demurred, saying that an examination always meant a new spray or an additional burning, and he had had quite enough of both. However, he reluctantly consented to a superficial examination, after assuring him that in order to give him any information of value regarding the selection of a climate, I should be obliged to know something of his condition. This inspection revealed the following:

The anterior nares was very capacious, with mucous membrane over anterior portion of inferior turbinated bone thoroughly bound down by cicatricial tissue, as the result of frequent cauterizations. A dry, atrophic condition with the normal functions largely arrested. Loss of the sense of smell, due to the destruction of olfactory membrane in roof of nose. The septum was found to be straight and regular back to the extreme posterior portion of the vomer, where was found a striking deformity, which presented a picture when examined posteriorly, not unlike the letter S. The opening on either side would scarcely more than admit the passage of a probe holding the smallest piece of cotton, and the least congestion in this locality involving the mucous membrane covering the posterior portion of the inferior turbinates, would necessarily complete the stenosis. The existence of this malformation demonstrated beyond question the lack of comprehension of the previous operators, or what was infinitely worse, if the condition were appreciated, was their gross negligence in failing to operate. My next difficulty was to convince my skeptical friend that he had anything left in his head to remove. The results following the use of the saw, bone forceps, drill and cautery were sufficient to convince him of the importance of the operation.

I trust you will pardon me for dwelling so long upon the details of this case. I can assure you I should not have done so had I not realized how frequently these conditions are overlooked, and how easily and effectively they are handled.

CASE 2.

Mrs. L. G. Aged 40. South Dakota. Housewife. First saw her in January of the present year. She complained of an inability to breathe through the left nostril; excessive dropping of mucous into the throat; partial closure of the left tearduct. Had been treated for several months at different intervals with various sprays, etc. At one time a strong acid was applied with cotton, which occasioned great pain and distress with greatly increased discharge, which continued for several weeks, resulting in almost complete closure of the nostril. Following this, her faithful attendants resorted only to the copious use of douches, sprays and oils. My examination several months after showed extensive adhesions between the middle and inferior turbinates, with the septum, effecting almost complete stenosis. The error in the conduct of this case was so apparent, that comment is hardly necessary. It is safe to assume that the result would have been reasonably satisfactory had the adhesions been regularly broken up, and the sloughs removed until the parts were entirely healed. The treatment in this case was so simple and effective that it is not necessary to relate it any more than to state that the obstruction was entirely removed with saw and forceps, and the relief was complete.

CASE 3.

I. D. L. Aged 41. Residence, Minneapolis. Complained of partial stoppage of both nasal cavities; offensive and copious mucous discharge, with frequently recurring attacks of asthma. Had been treated as usual with sprays and douches, and in addition to this,

large and long-continued doses of blood remedies had been poured into this poor man to correct the supposed existing blood disease. The removal of a large number of myxomatous growths from the nasal cavities was sufficient to relieve all the distressing symptoms.

CASE 4.

S. E. Male. Aged 26. Residence, North Dakota. Applied for treatment in November, 1898. Complained of dry catarrh, with large accumulations of dry crusts forming in nose, which he could only remove after snuffing up water for some time. Gave a history of having been operated upon one year before, at which time large quantities of bone and tissue had been removed from both nostrils. Great relief was experienced for a few months, when this condition supervened, and an offensive odor developed. Inspection showed a cavernous opening and entire absence of the inferior turbinated in left nasal cavity, with the middle turbinated almost totally obliterated as the result of repeated cauterizations. The right side presented a somewhat better condition, although it showed the results of great mutilation. I could offer but little encouragement in the treatment of this case, as the destruction of the parts had robbed the nasal cavities of much that was necessary to aid in its normal functions. The cavity left after the removal of the inferior turbinated bone was a receptacle for the accumulation of dust, small sticks and straws. The acute sensibility of the membrane was largely gone, owing to the atrophic condition which was rapidly developing, consequently the presence of foreign material was not appreciated until it interfered mechanically with respiration.

CASE 5.

W. A. L. Aged 37. Merchant, northern Minnesota. General health robust. Received injury to nose when a lad by falling on the ice. Occasioned but little difficulty at the time, and was not attended by a physician. Since that time the nose has been somewhat deformed, and for more than ten years had experienced difficulty in breathing through right nostril. Had passed through the hands of several operators, and the condition of the organ when I examined it less than a year ago, proved conclusively the truth of his statement. The inferior turbinated on the left side had been completely enucleated, leaving a huge opening which was exaggerated by the concavity of the septum. The right nostril was almost completely stenosed by the convexity of the septum, and the hyperbrophied condition of the right inferior turbinated. Just why this afflicted side had been so noticeably slighted by so many willing hands, was difficult to explain, unless an operation here promised a less brilliant result. A straightening of the septum, and a slight cauterization of the right inferior turbinated cured the trouble, and gave ample relief to that side, but nothing could be done to the left nostril to fill up the capacious receptacle that must continue to exist.

CASE 6.

A. W. Male. Aged 40. Had been treated over a long period of time with all the solvent remedies known to the profession. Finally found some one who comprehended the nature of the trouble to be a deflected septum, and who proceeded at once to correct the difficulty by removing a large section of the septum, and thereby producing a permanent opening between the cavities, which can never be repaired. This procedure afforded some relief, but I am sure you will agree with me that a less radical operation would have better served the purpose.

CASE 7.

The seventh and last case to which I shall call your attention was extraordinary only in this,—that a simple uncomplicated condition could possibly exist so long and avoid detection when so many were seeking an explanation for the obstinate and unusual symptoms. The case was a poorly nourished, anaemic, nervous little girl, scarcely five years of age, who was brought to my office by the mother less than a year ago, and the following history elicited:—The child was in perfect health up to something like two years before, when she developed a violent catarrh with very acrid and offensive discharge, without any previous illness. The discharge seemed more pronounced from right nostril, although both were involved. The whole lower part of the face was swollen and greatly disfigured, covered with an unhealthy eruption, produced by the poisonous and acrid character of the secretion. Many solutions had been tried, only to aggravate the distressing condition. The nose was repeat-

edly probed and cauterized and large quantities of tissue removed without effecting any appreciable change. Alteratives and constructives were given with the same negative results. Finally the nose was curetted, or as the mother expressed it, "dug out." After several weeks of prostration following this operation, the nasal cavity assumed its usual condition of chronic discharge, but I judge with much less obstruction, as much of the redundant tissue had been removed. This very fortunate result afforded me the excellent opportunity of locating and removing the difficulty which I should perhaps not otherwise have been able to do. Passing a probe along the floor of the nose back toward the soft palate, I discovered a slight elevation which was hard and unyielding. I assumed at once that this obstruction was something foreign, or a malignant growth. In my effort to obtain a section for microscopic examination, the cutting forceps revealed an encysted mass, containing what proved to be corroded and disintegrated metal, and I have here in my hand, the head of an iron screw, all that was left to verify the nature and character of the disturbance. This which was undoubtedly placed there by the child was the beginning of this trouble, some two years before, and was the source of all the subsequent disturbance. I have no word of comment or criticism for those who worked so diligently to relieve this condition, but will add that all the symptoms I could gather from the history of the case from beginning to end, pointed unmistakably to the presence of a foreign body.

Appreciating the fact that some of you may differ with me in your ideas of the management of many such conditions, I will, at the risk of taxing your patience, point out more definitely and explicitly, what seemed to me the most culpable errors and abuses in the conduct of these several cases, hoping that it may provoke comment, favorable or otherwise, which will be received with the greatest consideration.

The evident lack of comprehension of the condition of things in the first case was very greatly deplored, for had it been otherwise, and the excessive use of the cautery withheld, the normal functions of the mucous membrane might have remained unimpaired, and the posterior obstruction removed without appreciable detriment to the other tissues. Hence, I have no hesitation in condemning the use of the cautery, unless, perchance, it falls into the hands of one with infinitely more discretion and ability than was manifested in this case.

Much the same criticism would apply in the second case, where the escharotic was indiscriminately used over the middle and inferior turbinates, resulting in their extensive adhesions to the septum, all of which could have been avoided had proper precautions been adopted after the application of the acid. I should question the propriety anyway of using caustic acids in cases of this kind. It is always difficult to confine the application to a limited area, and always produces great discomfort to the patient by increasing the pain and discharge. The Galvan-cautery or bone forceps, judiciously used in experienced hands, will be much more effective, with an absence of many of the distressing symptoms.

In the third case, it would be difficult to conceive how any observer, competent to use the nasal speculum, could possibly avoid finding the growths that partially obstructed the nasal cavities, producing the reflex conditions mentioned. Further comment is unnecessary, as no question could arise concerning the feasibility of an operation when such conditions exist.

The results in the fourth case, where were evidences of extensive surgical interference, showed conclusively that the work had been excessively overdone. While I concede the wisdom and necessity of removing the turbinates in extreme cases, and have seen remarkable benefits resulting therefrom, yet I am constrained, after recalling my observation of these and other cases, to sound a word of warning to those who rather recklessly and without experience resort to this procedure, when less radical means would effect greater relief with less possibility of unpleasant consequences.

As was demonstrated in one or two of the cases related, the great mutilation of the parts will frequently remove sensitive areas which are highly essential to the preservation of many of the normal functions of the nose, leaving in their place hard, cicatricial, impervious tissue, that is absolutely devoid of sensibility.

In the fifth and sixth cases where the septum was involved, the errors were so apparent, and the correction so simple, that it is hardly necessary to dwell upon them. Suffice it to

say that I should always deprecate the removal of much of the cartilaginous portion of the septum, unless I was very positive I could approximate the surfaces after the removal. A large aperture in the septum is often unimportant, but it is always a receptacle for offensive mucous, and to a sensitive person, exceedingly disagreeable.

The failure to locate the foreign body in the seventh case, would, I presume, from a surgical standpoint, be considered reprehensible, but knowing something of the difficulties attending the examination and manipulation of a small child, I am inclined to be charitable, particularly when the foreign body is lodged well back on the floor of the nose, and the parts distorted from excessive swelling.

In closing I wish to state to those who follow this line of practice exclusively, that some of this work that I have reviewed, was not from the hands of experts, but rather from some of our professional brethren who do many of these operations on the side, simply for recreation and pastime.

If the presentation of these few cases, and the comments offered are of sufficient importance to awaken a little keener interest in this department of surgery, I shall feel that the object and purpose of this paper have been fully attained.

SURGICAL TUBERCULOSIS.

By G. G. Eitel, M. D., of Minneapolis.

Tuberculosis is an infectious disease due to the introduction into the system of the bacillus tuberculosis discovered by Koch in 1882. It has a very widespread, almost universal distribution, and it is estimated, that one-seventh of the deaths annually occurring among mankind are due to this disease alone. If one-seventh represents the mortality from tuberculosis, it is safe to state that a very much larger proportion of mankind is affected with it; as it is a fact well ascertained and established beyond question that all persons who have tuberculosis do not die of that disease. Besides, many diseases formerly of questionable etiology and pathology are now known to be tubercular in their nature.

We have no history of a sufficiently reliable nature, telling us when and where this disease first made its appearance among the human race. Several writers have traced it back as far as the Jewish pilgrimage from Egypt through the desert to the Land of Promise. That it also existed among the Egyptians, Assyrians and other ancient races, likewise appears to be well authenticated. It has been stated by one writer that the disease was unknown among the native tribes of Australia before Great Britain introduced it by sending her penal colonists to that continent. There seems, however, to be no way now of establishing either the truth or falsity of this statement.

We have very substantial evidence of the fact that no land or no race of people, has, so far as we are able to learn, escaped the ravaging visitations of tuberculosis, although it has been ascertained that certain peoples and portions of the earth experience greater immunity from it than others. The disease is extremely rare among the inhabitants of the mountainous regions of South America, in the steppes of Russia, and in the high table-land known as the continental divide in the United States. The comparative infrequency of the disease in the localities mentioned probably has its explanation in the favorable climatic conditions prevailing in these regions.

The bacillus tuberculosis, the essential etiological factor of this disease, gains admission into the body most commonly through three channels, viz: With the inspired air, with the food ingested, and, perhaps more commonly than is supposed, by direct inoculation through abrasions and traumatisms on the surface of the body and through similar channels upon mucous membranes. The tonsil is perhaps the most common source of entry for the infection of the cervical glands, and the mastoid region via the Eustachian canal through the middle ear, producing a small per centage of all cases of mastoiditis. The eye also is a frequent seat of tubercular disease, a certain proportion of cases of iritis being beyond question tubercular in their nature. Phlyctenular disease of the eye has also been ascribed by some writers to be tubercular in its nature, but thus far the investigators have not been able to demonstrate the presence of the specific bacillus in this condition. Perhaps the most common mode of introduction of the bacilli of tuberculosis is by inhalation of an atmosphere laden with these germs, and, as a consequence, the respiratory tract is the most frequently recognized seat of the disease.

*Read before the Minnesota State Medical Society.

An examination of the literature and accumulated clinical data, however, of the surgical aspects of tuberculosis shows that the frequency of the surgical forms, almost equals the proportion of cases of pulmonary tuberculosis. It is only necessary to advert to the multiplicity of forms assumed by this malady, to demonstrate how frequently it is encountered by the surgeon. An examination of the recognized forms of the disease, other than pulmonary tuberculosis, will perhaps prove of benefit in showing how numerous and general they are. Tillmann defines surgical tuberculoses as those forms of the disease coming within the jurisdiction of surgical therapy, and includes the very common tuberculoses of the skin, mucous membranes, lymphatic glands, sheaths of tendons, and bones and joints.

Undoubtedly the greatest proportion of cases of surgical tuberculosis come under the head of tuberculosis of the bones and joints. It is on this phase of the disease that we have our strongest literary fortifications; great credit being due to Volkmann and Kuster, on the continent of Europe; to Watson-Cheyne in Great Britain; and to Nicholas Senn in the United States.

In a paper of this scope, it is impossible to more than merely present a brief outline or resume of a subject so extensive, important, and of such universal interest, as tuberculosis. A few general suggestions only can be presented for the early recognition and management of the multiferous forms of this disease. Of the other more common forms of tuberculosis, coming to the notice of the surgeon, may be mentioned the several varieties of skin tubercle, the laryngeal, intestinal and glandular forms, tubercular peritonitis, tubercular pleurisy, the latter frequently eventuating in an empyema, often requiring rib-resection, or other surgical procedure. Tuberculosis of the kidney, the supra-renal body, and of the intestinal glands, are only a few of the surgical aspects of this unfortunately very common disease. Tuberculosis of the meninges of the cord and brain is to be mentioned merely to remind us of its almost uniform fatality. Tuberculosis of the uterus, and its appendages is rare. The proportion of cases of appendicitis, due to tubercular infection has not yet been accurately ascertained, but that such a condition exists has been demonstrated beyond question. The subject of the co-existence of cancer and tubercular disease, and their alleged influence each upon the other, is now being investigated, the deductions therefrom promising some additional light upon this very interesting association of the disease under discussion.

The clinical history of surgical tuberculosis has grown to great and important proportions within the past decade. A vast fund of knowledge on the various aspects of this disease has been accumulated and disseminated. Much has been accomplished in original research, while the improved technic of modern surgical procedures has made possible many operative measures heretofore impractical, so that to-day scarcely a region or organ of the human body affected with tubercular disease, amenable to operative treatment, can be said to be outside the domain of surgery. The recent writings of Senn on intestinal tuberculosis, and tuberculosis of the genito-urinary system, are very valuable contributions to the already existing literature on this subject.

For the purpose of this paper, it will be necessary to allude to the subject of the prevention of tuberculosis only in a very brief manner. Volumes have been written, pro and con, on the subject of the hereditary transmission of tubercular disease. While it is an undoubted clinical fact that tuberculosis is more frequently encountered in patients giving the so-called family history, and while it is also the fact that cases of actual transmission of the disease are recorded by Senn and other writers, yet it is, I believe, the generally accepted position of authorities on this subject, in the light of recent bacteriological investigations, that the hereditary aspect of tuberculosis finds its most frequent expression in the so-called inherited depraved cell condition, commonly spoken of as the tubercular diathesis or tubercular tendency. While on the other hand, again, we meet many cases of tuberculosis in which the patient gives us an absolutely clear "bill of health" as regards family history. These latter must, except in very rare instances, have their explanation in the well ascertained direct infection with the bacillus of tuberculosis.

Tillmann says: While primary tuberculosis of the hip-joint is always spoken and written of as a surgical lesion, it is a well established fact that it admits of a complete cure without surgical operation by the placing at rest

or the immobilisation of the diseased joint, thus arresting and localizing the disease process, and preventing its spread to adjacent parts and to the general system. The general principles of treatment of tubercular diseases are two-fold; the first being directed to the system at large, and including rest, climate, diet, and general hygiene, while the second is directed more particularly and directly to the affected parts. These latter include all forms of operative and mechanical treatment, such as amputation, resection, arthrotomies, pressure, rest, immobilisation of joints, extension and counter-extension, counter-irritation, Koch's tuberculin, local injections into joint and abscess cavities, massage, baths, exercise, and in fact every other means calculated to promote the general nutrition of the patient.

Tuberculosis of joints, chronic fungous arthritis, and tumor albus are terms that even now are being used synonymously to indicate a form of inflammation of joints, which clinically is characterized by its chronic course, and the absence of acute signs of inflammation. This affection is by far the most common joint disease, so much so, that Konig states that in surgical clinics the surgeon will have one hundred cases of tuberculosis of the joints to deal with to one of the other classes of inflammation, such as gonorrhoeal, syphilitic, suppurative osteo-myelitic, rheumatic, or the metastatic inflammations subsequent to acute infectious diseases. And again, in ninety-five out of every one hundred cases, chronic inflammation in bone means tuberculosis.

Volkmann found tubercle bacilli in the skin of an eczematous forearm, and it is probable that many cases of tuberculosis of the cervical glands in children, are caused by the entrance of tubercle bacilli through an eczematous patch on the face, ear, or scalp. In perhaps ninety-five out of every hundred cases of tuberculosis of the lymphatic glands, the disease attacks the glands of the neck,—as the scalp, face, and mouth are parts of the body most frequently the seat of slight injuries and superficial lesions, and also most exposed to tubercular infections.

Cheyne, referring to the treatment of surgical tuberculosis says: Speaking generally, I do not think we ought to take a very gloomy view as regards the prognosis of surgical tuberculosis, which is held by some to whom the diagnosis, tuberculosis, at once suggests an extremely grave prognosis, and a great necessity for radical operative interference. The prognosis does not so much depend on the general views as to the curability of the disease as on the local conditon of the individual case, and its tractability or intractability to treatment.

Wartmann, in a large number of cases, found that after excision, ten per cent. died of acute general tuberculosis, many of the cases being apparently directly due to the operation. Of course, it must be remembered, with regard to all statistics of excision, that, until quite recently, excision was only a very partial operation, as regards removal of the disease, and statistics, based on excisions as formerly performed, are no answer to the proposition that the removal of the disease will diminish the risk of general infection. I know of no statistics embracing a sufficient number of cases where the results of amputation above the affected part, or of really complete arthrectomies or excisions, are given, and I can only say, that as regards my own recent cases, while I have, I think twice lost patients from tubercular meningitis, after partial operations, I have had no case of the kind after complete ones. It seems to me to stand to reason that complete removal of the disease by cutting beyond it, not by scraping or gouging, cannot cause any real risk of dissemination from the original focus.

As regards pulmonary tuberculosis, also, while some cases may be arrested by early and radical operation, others may be precipitated by partial operation. Thus Middeldorpf found that, after twelve and one-half years, sixteen per cent. of those amputated (whether through or above the diseased part, is not stated) had died of tuberculosis, fourteen per cent. of those excised, and thirty per cent. of those where caseous deposits were scraped out. Hence, except in the case of existing pulmonary tuberculosis, I do not think that the hope of preventing the extension of the disease need influence us to a large extent in deciding on operation as against expectant treatment. But in a case where the decision is doubtful, this danger may be allowed to turn the scale in favor of operation. On the other hand, in deciding what operation should be done, when the patient is highly predisposed, and likely to develop tuberculosis elsewhere, the danger of partial operations must be borne in mind, and the decision given in favor of radical measures.

* SUPRARENAL EXTRACT IN OPHTHALMIC AURAL AND ALLIED SURGERY.

By A. G. Aldrich, M. D., Minneapolis.

Late Clinical Assistant at the Royal London Ophthalmic Hospital and the Central London Throat and Ear Hospital.

Of making medicine there is no end, and it is not surprising that many of us have grown skeptical regarding the value of new therapeutic agents.

Two years ago, several months after the introduction of suprarenal-capsule extract, when Dr. Bates made such a favorable report regarding its use in the eye, I still remained doubting, until a personal trial, not only in the eye but in the ear and nose, convinced me that every claim made for it originally could be fully proven by the most perfect clinical pictures.

Suprarenal extract is fully entitled to an honored place by the side of cocaine in both the local, therapeutic and surgical treatment of the eye, ear, nose and throat. And when we consider its simplicity of action, that of a local vaso constrictor of capillaries and a contractor of erectile tissue, and the value of such conditions in operations on mucous surfaces, we surely can not but feel a sense of gratitude for the little things, which, in these days of great surgical achievements, are frequently lost sight of and unappreciated.

I report with pleasure the gratifying results of what I believe to be a fair and thorough trial of the clinical use of suprarenal extract, hoping that I am not the only enthusiast, but that others present will have still further experience to give, or something new to offer regarding the value and possibilities of this agent.

I will not weary you with an extended description of this comparatively new therapeutic agent, further than to say that suprarenal extract is derived from the suprarenal glands of the sheep, and contains as an active principle a substance, which when applied to mucous surfaces, has the power to cause the peripheral vasomotor apparatus to contract the smaller bloodvessels. Attempts have been made to isolate this active principle, but with the exception of a product called ischaemin, made by Dr. Wagner, and which has never met with favor, I know of no preparation other than the aqueous extract.

When in solution, suprarenal extract is one of the most perishable of the gland products, and even a filtered, sterilized solution should not be used after it is twenty-four hours old.

I have found the most satisfactory solution to be made as follows:

℞ Tablets suprarenal ext.....X grs.
(Phos. Alb. Co,'s.)
Acid boric.....X "
Aquae (sterilized).....℥i
Fiat Mist. Filter.

The ischemia produced with the above solution is so perfect and permanent as to permit of operations upon mucous surfaces practically without hemorrhage, and with clear lines of demarcation. Such an active and permanent blanching enhances a more lasting anesthetic effect of cocaine, not only by enabling the cocaine solution to more thoroughly penetrate the mucous surface to the sensitive tissue beneath, but prevents by its hemostatic effect washing away of the anesthetic; all of which is of the greatest importance in operations upon or immediately beneath mucous surfaces.

My observations have been, that the local action of this agent in solution as above, is from twenty minutes to one hour. It has never failed to produce the same results, and however frequently used, is never detrimental to the tissues. Some have claimed that wounds on mucous surfaces heal more quickly after its use, and that it prevents the poisonous effects of strong solutions of cocaine. This I can not affirm, but can say that since using suprarenal extract and warm solutions of cocaine, I have not used cocaine in solutions stronger than from 4 per cent. to 10 per cent. My method of using it is to apply the cocaine, and follow by applications of suprarenal extract, sometimes repeating the applications once before operating, and if necessary, once during the operation.

My first experience with it in operative work on the eye was in the removal of pterygii, and the perfect demarcation of lines between pterygium and conjunctiva, the complete anesthetic effect of cocaine, together with the firm yet movable ischemic tissue made it possible to do, not only a painless and bloodless operation, but a very artistic one. I now never operate on pterygii without the extract, and I also follow the operation by its instillation

*Read before the Minnesota State Medical Society.

twice daily for several days. After this method, the patient observes an early and clear cicatrix which is more pleasing than the swollen and sometimes irregular lines of union following these operations.

In operations in the drainage apparatus of the eye, after instilling warm solutions of cocaine, followed by injecting the solution of suprarenal extract, one can operate with but trifling pain and with almost entirely bloodless surroundings.

Pleased by such results with it surgically, I now regularly use it in probing the nasal duct, and I can assure you that my patients are delighted with the new method.

In cases of complete tenotomy of the ocular muscles, and in advancement of these muscles, it greatly aids cocaine anesthesia, and materially lessens the hemorrhage. Operations for advancement are particularly painful, and some nervous patients can not bear the pain without general anesthesia, which is sometimes impractical or of great inconvenience. By making frequent applications, alternating the cocaine with the suprarenal capsule solution, one can operate with far less pain than with cocaine solution alone, and also with solutions under the danger line in strength.

In the ear it has but a limited effect. I have used it mostly to get a better anesthetic effect of cocaine in the removal of polypi and granulations. It will also, to a certain extent, control the hemorrhage accompanying these operations, but the anatomic conditions do not allow it full play.

Pleasing as have been my results with the extract in minor eye surgery, it remains for me to say that in all operations within the nasal cavity, it is, next to cocaine, of the most valuable service. In these cases, cocaine is unable to produce or to sustain its perfect action as a local anesthetic, without the aid of suprarenal extract.

In all operations, and in galvano-cautery applications, the ischemic condition resulting from applications of the extract enables one not only to have highly anesthetized tissue, but a clear field of operation, practically free from hemorrhage.

In the throat, one finds after its use the same conditons while operating as in the nose, only in a lessened degree. It aids in galvano-cautery operations by enhancing the effect of cocaine,, and the same may be said of it in tonsilotomies. I have not observed that it materially lessened the hemorrhage. It is also practicable in adenoid operations.

Briefly I can sum up my experience with it as follows:

First. The extract of suprarenal capsule is one of the most powerful of vaso-constrictors, and is, in addition thereto, an erectile tissue contractor.

Second. As such it allows a deeper and more perfect anesthetic action from the local use of cocaine, enabling the surgeon to have highly anesthetized surfaces and tissue for operation.

Third. The ischemia from such action is so profound as to act as a prolonged hemostatic, giving thereby a clear field for operation, and preventing secondary hemorrhage.

Fourth. Its action can be depended upon, in every case. It is in no way deleterious to tissues operated upon, nor does it interfere with aseptic healing.

601 Dayton Building.

RECURRENT APPENDICITIS WITH PERFORATION; REPORT OF A CASE: OPERATION AND RECOVERY.

By W. Z. Flower, M. D., Gibbon, Minn.

S. E. N., male, age 20, was taken with a severe pain in the stomach, and hepatic region, accompanied with some nausea. He was brought into my office January 15th, 1899, the morning after the commencement of the attack. I found that he had a temperature of 101, pulse 125, and was suffering with considerable pain, which he located over the lower margin of the liver. I found pressure over a spot as large as a half dollar, located four inches on the right side, and one inch above the umbilicus, would cause considerable pain. He had no pain or tenderness over McBurney's point, and there was no enlargement or tumor to be found. He also complained of being constipated.

With all symptoms of appendicitis with the exception of the location of pain and tenderness. I thought it advisable to watch developments, so I ordered laxatives, sent him home, with instructions to report the next day. Jan. 16th, he was nearly free from pain. His bowels not having moved, I ordered a large

dose of castor oil which was followed by a free movement, the same day. He having some tenderness remaining I sent him to Dr. O. C. Strickler, of New Ulm, to clear up the diagnosis. When he arrived at New Ulm his symptoms had all abated so a positive diagnosis could not be made. He was sent home, with instructions to report at the first symptoms of the trouble recurring. On February 1st, three weeks following the first attack, I was summoned post haste to his residence, about three miles in the country. I found him sitting near the stove, he had a temperature of 101 2-5, pulse 120, and was complaining of severe pain over the stomach, which extended over the liver.

I ordered him removed to the hospital on first train. They brought him into town on a bob-sled. I placed him on the train, and went with him to New Ulm, some twenty-five miles distant. While enroute he was taken with a severe pain, commencing on right side and extending all over the abdomen, it was followed with a slight chill. When we arrived at the hospital his temperature was 104 3-5, pulse 135, with all symptoms of general peritonitis, which was diagnosed as such, having followed appendicitis with rupture. We held out but little hope for his recovery from an operation, which was performed by Dr. Strickler, assisted by Dr. Weiser and myself. The operation took place the same day at 4:20 p. m., at that time he had a temp. of 104 3-5, pulse 135.

In opening the abdomen four or five drams of pus oozed out. The appendix was found up under the lower margin of the liver, some four inches from its normal location, it was very much enlarged and gangrenous at the base, which plainly showed the seat of abscess. After the removal, the treatment consisted in wiping out cavity and wound, and packing it with iodoform gauze, we preferring this mode of treatment to the flushing out of the abdomen with aseptic solution which frequently cannot be entirely removed.

At 5:30 p. m. his pulse dropped to 112, temp. 104 1-5. At 7:20 p. m. he was given ¼ gr. morphine, as he was unable to stand the pain; 11:20 p. m. temp. 101 1-5, pulse 114. Feb. 2, 5:45 a. m., pulse 102, temp. 99 3-5; was given teaspoonful doses of hot water. Feb. 3, 8:30 a. m., pulse 86, temp. 99; packing was removed at 9 a. m. After the fifth day the temp. did not go above 99 nor pulse above 92. He left the hospital February 21st, three weeks after the operation, in good condition.

The object in reporting this case, is, to call your attention to the fact that we can not depend on the location of pain and tenderness as one of the positive diagnostic points in appendicitis, also that cases of perforation with peritonitis are amenable to treatment, and that we are justified in operating on these cases regardless of the censures of the laity. Further, operations after rupture give us the only hope of recovery. The reason I prefer the wiping out of the wound and packing it with iodoform gauze, to that of flushing, is that the introduction of any fluid into the peritoneal cavity thins the remaining pus, thereby placing it in a condition to allow the lymphatics to absorb the remaining toxic material, followed by the usual results of general peritonitis, pyemia and death. Aug. 19, 1899.

DO WE NEED IODOFORM?

By F. A. DUNSMOOR, M. D.

The tendency to follow beaten paths, rather than act upon reason, is not new in surgery. Iodoform is not a germicide, yet it is more often used in the form of gauze dressing for pus cavities or septic wounds than any of the so-called antiseptics or germicides. It has the most disagreeable and lasting odor of any surgical drug, yet displaces more elegant, cheaper, and effective remedies, devoid of odor. It is poisonous, and frequently irritating to a sensitive skin; yet, patients must submit to its application, while the supply houses offer a large list of bland and non-poisonous remedies for local dressings.

To the credit of iodoform, however, it can be said that it lessons the power of certain microbes by liberating free iodine upon direct contact. Mixed with glycerine, forming an emulsion of 10 to 20 per cent., it has been extensively used for injections into tuberculous foci, and many surgeons have vaunted its value when so used between joint surfaces. The writer knows that in such cases it fails four times as often as it cures. I do not mean it fails for simple joint effusions where any incision or aspiration produces a cure; but where there is undoubted tuberculosis of joint cartilages, then I am certain that iodoform does not, in itself, cure the tuberculosis.

The chief claim for its value has grown out of the use of iodoform gauze for dressings within the vagina, bladder, rectum or mouth, and, in a lesser way, for temporary use in cases of purulent appendicitis, and where large abraded surfaces present examples of continued parenchymatous hemorrhage.

Having said this much, what more can be added as a reason for the continued use of a drug, clinically and chemically inefficient, poisonous, disgusting, irritating, and having su-

perior remedies as successors for each place where iodoform has been used? If it were not for this last statement, this brief article would not have been written.

For dusting lines of union in sutured wounds, boric acid is vastly superior, is an efficient germicide, and may also be as safely used in the form of gauze for all places where iodoform has been a favorite, save for the control of hemorrhages when acetanilid should be used. Aristol, dermatol, or iodol may be used for covering wounds, if preferred to boric acid.

APPENDICITIS—WHEN TO OPERATE.

(Richardson in Jour. Am. Med. Ass'n.)

The question of operation in cases of appendicitis is growing in intensity, possibly because we are nearing the time when our data should furnish us with some pretty definite rules for guidance. Of interest in this connection is a paper read by Dr. M. H. Richardson, of Boston, before the American Surgical Association.

The conclusions arrived at are the results of experience in 904 cases personally observed and treated, and of personal observation of many other cases in the practice of his hospital colleagues. He states that at the bedside, in a specific case of appendicitis, there would doubtless be little difference of opinion among even those surgeons who seem to differ materially in the expression of their views. There is a wise middle course by which unnecessary operations are avoided and necessary ones performed.

I. In the initial stage: (1) Severe symptoms of onset demand immediate intervention. These symptoms are pain, vomiting, tenderness, rigidity, shock—those common to most acute abdominal emergencies; (2) cases of mild onset may well wait until a second observation shows the probable course of the case. The most important question is not whether to operate in appendicitis, but rather when to operate. In a large percentage of acute cases recovery from the acute attack will take place, and operation can be safely performed through a small incision which will not weaken the abdominal wall. Cases must not be watched, however, unless there are reliable signs of convalescence.

II. After the initial stage, the question becomes more difficult. When observed for the first time on the second, third, or fourth days, (1) severe cases should be operated on at once, unless they are improving so rapidly that there is a strong expectation of complete recovery and interval operation. Intervention is still more strongly indicated if the symptoms are increasing in severity. Operation is indicated if the symptoms recur after marked improvement. After the early hours, the character and extent of pain, tenderness, and rigidity, are important as determining the width and depth of the area infected. The constitutional signs are less reliable than the local. (2) If the patient is improving with a successfully localized peritonitis of considerable extent, especially if centrally localized, as in the pelvis, let operation be postponed until intervention can be safely practiced, because these cases comprise, in the absence of general peritonitis, the most dangerous ones. The chief objection to operating in every case is the danger of converting a local into a general peritonitis.

Intervention becomes safer with a few hours or days delay in improving cases: (a) because the general exudate, so easily infected during operation, becomes absorbed; (b) because the local exudate diminishes in size; (c) because walling off with gauze is practicable when adhesions are firm, impossible when they are thin; (d) operation at once ruptures the localized peritonitis and starts the too often fatal peritonitis. If the patient is not actually improving, this serious danger must be deliberately encountered, because the localized peritonitis will probably rupture by itself without operation. When there is a tumor situated to the right side, or directly under the abdominal wall, so that walling off with gauze is practicable, operation may be performed under conditions that would contra-indicate intervention when the tumor is centrally located or in the pelvis.

A. T. Mann.

THE IMPORTANCE OF THE RECOGNITION OF CERTAIN BLOOD-CHANGES, AND ESPECIALLY TOXÆMIA, IN OUR THERAPEUTICS.

By John V. Shoemaker, M. D., LL. D., of Philadelphia.

Address Before the Ohio State Medical Society, at Springfield, May 11, 1899, as Published in the Medical Bulletin, Philadelphia.

After the usual congratulatory remarks by the distinguished practitioner of the "City of Brotherly Love," and professor in the Medico-Chirurgical College, the speaker entered at once into his discussion which was enthusiastically received. He spoke as follows:

Of late years much attention has been given to a study of the physiology and pathology of the blood. From the crude instruments and imperfect methods employed only a few years ago, we turn with pride and gratification to the improved equipment and perfect technique of the present day. We now, as a matter almost of routine, ascertain the percentage of hæmoglobin and determine the actual and relative richness of the blood in red and white corpuscles. By staining-methods we also determine the presence and proportion of hæmatoblasts and eosinophile-cells, and observe other evidences of pathological conditions. Examination of the blood for the malarial organism, or for the pathogenic bacteria, is now a part of regular clinic-work. Simple and very practical methods have been devised and are in use for ascertaining the specific gravity of the circulating fluid, and for the determination of the proportion of iron which it contains. In view of all the improvements in our apparatus and technique, only a few of which I have mentioned, I think that you will agree with me that we are better prepared to take up the pathology and therapeutics of the blood at the

present day than at any preceding period of the history of medicine.

Virchow is said to have declared that "disease has a material ens; it is the altered cell." But we know that, in many instances, the cause of alteration of the cell is an antecedent change in its blood-supply, which has affected its nutrition and impaired the performance of its functions. We are therefore thrown back upon certain pathological conditions, or constituents, of the blood which must be changed or removed before healthy cell-growth and normal metabolism can be re-established. This may appear to you like a return to the old humoral pathology, but, on the contrary, it is the most recent development of medical science. It is the result of the utilization of all the resources of modern medicine in the direction of the investigation into the causes of the phenomena of disease and of the means to be employed for its relief. We are reminded of the illustration given by a distinguished scientist, a few years ago, in speaking of another department of science. He said, in effect, that knowledge advances, not in a straight line, but, as it were, in a spiral; so that while the pendulum appears to swing back to a former position, it actually occupies a higher plane than it did before.

Accepting the old rule of practice embodied in the words obsta principiis, it becomes very evident that in our therapeutics it is of the highest importance to recognize the true nature of the alterations in the blood which cause, or are attended by, cell-disturbance. It is acknowledged that many of these alterations are at present beyond our means of recognition except through their effects. They may be provisionally divided into three classes according to their character:—

1. Those in which there is a diminution or absence of certain principles of the blood which are necessary for healthy cell-development and metabolism. In illustration, the instance occurs to me of the peculiar bodily disorder and mental impairment caused by the removal of the thyroid gland, thus depriving the blood of some important internal secretion necessary for health. The proof of this hypothesis is supplied by the process of induction pursued by Dr. Murray, of Newcastle, England, who has shown us how to cure myxœdema and allied conditions by the administration of thyroid glands of the sheep or of the thyroid extract. When we treat anæmia with iron, rickets with lime-salts, scurvy with lemon-juice, or neurasthenia with hypophosphites, this principle is followed of supplying to the blood certain proximate principles which are needed for healthy metabolism. We know that some individuals are naturally insusceptible to certain infections, and that every one possesses a variable power of resistance to infectious diseases. Very recently we have learned that this absolute, or comparative, immunity is due to the presence in the blood—we are not at present concerned with the question of how it gets there—of some constituent which we call, for convenience, "antitoxin." You anticipate my argument, I am sure, that where the natural antitoxin is deficient and fails to protect the system, the introduction of antitoxin from a source without the body becomes a rational, therapeutic procedure. That this has been successfully accomplished in the case of diphtheria we are all aware. With less success, but still with promising results, similar experiments in this field have been made, and are yet in progress, in the treatment of erysipelas, tetanus, typhoid fever, tuberculosis of the lungs, plague, pneumonia, cholera, and yellow fever. In the case of vaccination against small-pox the conditions are not quite the same, for here it is sought, by inoculating the system with vaccinia, to cause the body itself to supply such an increased amount of antitoxin against variola as will enable it to successfully resist exposure to infection of this kind.

2. Those in which certain principles, normally present in the blood, are in such relative or actual excess as to disturb metabolism. Illustrations of this are numerous. Diabetes, for instance, is a prominent one, since we all admit that there must be glycohæmia before there can be glycosuria. The clinical manifestations of gout, lithæmia, and rheumatism—such as asthma, bronchitis, psoriasis, iritis, and urinary disorders—we all take into account in our therapeutics. I need not discuss this point further in the presence of such an audience as there is before me to-day.

3. Those in which abnormal elements in the blood disturb cell-action and cause manifestations of disorder or symptoms of disease.

I will now take up for discussion the effects of certain poisonous substances with which we are all familiar, such as lead, mercury, arsenic, or even alcohol, tea, or coffee, since we daily take them into consideration in prescribing for our patients. What I especially wish to direct attention to is the often-overlooked consequences of the presence of those products of bacterial growth, which are absorbed into the blood, and are known by the general term of "toxalbumins" or "toxins." I am not now speaking of the familiar illustrations afforded by typical cases of infectious disease, such as the specific fevers; but of the more obscure cases, in which the connection between the cause and effect are less evident.

Thus we find that, in certain cases of indigestion, as pointed out by Lauder Brunton, from the mass of fermenting food, in the stomach or intestinal tract, certain poisons are absorbed by the blood, which give rise to symptoms popularly grouped under the general title of "biliousness," which includes loss of appetite, nausea, weakness, muscular pains and headache, depression of spirits, and so on. They are as "familiar as household words" to us all. How often have we found skin affections, such as eczema, caused or maintained by a similar condition of the digestive tract? The gastro-intestinal origin of toxins has now been demonstrated to exist also in tyrotoxicon (cream-puff, ice-cream, or custard) poisoning and also in botulismus, or sausage poisoning. These symptoms are capable of development, under certain circumstances, therefore, by ordinary saprophytic bacteria. There are also cases of toxæmia from common forms of pus-bacteria: the streptococcus and staphylococcus. Thus Dr George H. Rohé, shortly before his lamented death, published a paper declaring his conviction that post-operative insanity is due to sepsis. A very remarkable instance has been recently reported, of a woman who had for years suffered with a lupus of the face which had resisted the usual methods of treatment. In this case the lupus underwent a spontaneous cure after the removal of a Fallopian tube which was found to be distended with pus. When the source of the toxin was eliminated by removing the pus-tube, the natural antitoxin of the blood was apparently able to cope with the disease and to cure it. We recall, also, in this connection, the curative effects that have been obtained in some cases of lupus from injections of tuberculin.

If we are asked more specifically about this peculiar quality of the bacteria, which we have termed virulence, and its relation to toxæmia, we must confess that we only know that it exists and, as Pasteur has shown, that it is a variable quality; that is to say, that bacterial inoculation is not necessarily followed by bacterial infection, or toxæmia. The importance of this fact to us as physicians is very great, for, from the clinical standpoint, the difference between a virulent diphtheria bacillus and a non-virulent diphtheria bacillus is as great as the poles, or as Heaven is from Hades.

Directly in this connection there is a very interesting clinical fact to which I would like to call your attention. It is now finally established by recent bacteriological work, that air-borne bacteria of all kinds, including, therefore, saprophytic and pathogenic varieties, are constantly found in the nasal

mucus and in the glandular tissue of the nasopharynx and tonsils. For instance, it has been shown that in cases of chronic rhinitis and tonsillitis diphtheria bacilli may be found in the discharges without being attended by the typical and characteristic symptoms of diphtheria. In such cases the bacilli do not seem to possess their full degree of virulence, or the system of the individual is possessed of a higher degree of resistance; so that the toxins are not produced in sufficient quantity to cause the profound toxæmia which characterizes the disease that we call diphtheria. At the same time we must not assume that this quality may not, under favorable circumstances, be manifested, and we believe that such patients may communicate true diphtheria to susceptible persons who come in contact with them. The point which I wish particularly to make is that, although the diphtheria bacilli in such cases do not elaborate enough toxin to produce symptoms of acute poisoning, yet they do produce a certain amount of their peculiar poison, and this mitigated toxin, if you will, being constantly absorbed by the blood, is capable of causing ill health and cachectic conditions, including eruptions on the skin, especially in children. I feel warranted, therefore, in stating that in many otherwise unexplained conditions of anæmia, neurasthenia, and impaired nutrition the cause will be found to exist in toxæmia due to a chronic diphtheria infection of the upper air-passages. The remedy is a very simple one in this class of cases: all that is necessary to do is to disinfect the nose and throat and correct the morbid condition of the blood.

The condition of icterus has an origin in the blood in a greater number of cases than has been hitherto supposed. We know that the introduction of certain chemical substances into the circulation will cause destruction of red blood-cells and, in consequence, the appearance of pigments of reduced hæmoglobin in the blood, the tissues and the urine. Two factors are necessary for the production of this form of jaundice: an excessive destruction of blood in the spleen and an impaired cell-action in the liver. For example, after the administration to animals of poisonous doses of toluylhydrazin and metaphenylendiamin, both of which cause jaundice and icteric urine, the spleen is found to be very large and enormously charged with a golden-yellow pigment. The portal vein and the capillaries of the liver are also highly colored by this pigment, carried over from the spleen, which is the organ of blood-destruction. The liver-cells are pale and in a state of fatty degeneration, but quite free from pigment. There is much pigment in the blood of the hepatic veins, and pigment-granules are found in the secreting structure of the kidney. Thus, granular pigment, which is brought to the liver from the spleen, is carried over into the general circulation and, undoubtedly, pigment existing in a soluble form in the blood-plasma is also carried over. Thus, we see that, under certain circumstances, the pigments of reduced hæmoglobin, including bilirubin, will be carried beyond the liver into the general circulation, staining the tissues, discoloring the urine, and bringing about a true hæmatogenous jaundice. This corresponds to the jaundice due to the absorption of the decomposition-products of a large extravasation of blood, as Virchow has shown that the hæmatoidin is, in this case, identical with bilirubin. In cases of low fever, therefore, accompanied by swelling of the spleen and destruction of red blood-cells, we may have absorption of the pigment from the reduced hæmoglobin, followed by the development of jaundice, and yet the liver and bile-passages be unobstructed.[1] In such cases our therapeutics should be directed to the blood and the spleen rather than the liver and intestinal tract.

Albuminuria is likewise occasionally due to toxins or to certain products of waste which accumulate in the blood. In such cases the kidneys may be free from disease and the albumin will disappear from the urine when the blood is restored to a healthy condition. In the albuminuria of pregnancy, for instance, it is a common observation that the symptom is relieved by the induction of premature labor. In an instance reported[1] some years ago disease of the liver and kidneys of the fœtus preceded the appearance of albuminuria and general anasarca in the mother, thus affording a unique instance of the production of Bright's disease of the kidneys through some toxic substance circulating in the blood, because there was no direct connection between the mother and fœtus except the blood in the placental sinuses. Some years ago Drs. Da Costa and Longstreth[2] showed that in certain cases of Bright's disease there was disease of the nervous ganglia, especially of the abdominal plexus of the great sympathetic. It would seem probable, or, at least, possible, that, previous to the disease of the nervous ganglia, there had occurred some change in the blood affecting their nutrition in the manner such as we have just been considering.

I shall not stop to discuss at greater length how much the recent views on the pathology of the blood and especially the presence of toxins elucidate other vexed questions in clinical medicine, nor shall I have time to point out in detail the numerous therapeutic applications that may be made of it. It is a very old truth that Kee Nephesh Habassar Baddom, "The blood is the life of the flesh," and modern science fully confirms it.

Susceptibility to infection is the reverse of immunity, and appears to be due to the absence from the blood of certain protective constituents, called antitoxins, just as immunity is maintained by their presence. This is an inviting field for further study. Promising results have been obtained, as I have already stated, in a number of diseases. Experiments have also been made in the field of surgery, in the prevention of superative processes, and also in the treatment of malignant growths. Dr. Coley, of New York, has obtained remarkable successes in treating inoperable sarcomas by the use of cultures of the bacillus prodigiosus and of the streptococcus and it is hoped that shortly there may be announced the discovery of a successful treatment for cancer by the adoption of similar methods. The uniform failure of experiments in which it was sought to inoculate animals with cancer would indicate that the exciting cause of carcinoma does not reside in the lesion itself, but is remote from it. In other words, it is due to a disturbance of nutrition which may be explained by the presence in the blood of some toxin.

I will leave this subject for your consideration and will conclude with a single remark, which has a direct bearing upon practical therapeutics. The recognition of the rôle played by toxins in producing disease and of the therapeutic value of antitoxins and organic extracts of various kinds has placed in our hands a new class of remedies. Some, like diphtheria antitoxin, and thyroid and suprarenal extracts, have already obtained an established place in our medical armamentarium; others, such as tuberculin, and cultures of streptococcus, mallein, bacillus prodigiosus, etc., are still on trial. In the near future there is no doubt that their number will be greatly increased.

I would suggest that, owing to the difficulty of ascertaining, or establishing, a standard of activity, or potency, for this class of remedies, some supervision by the profession, or by the government, should be held over their manufacture and sale, just as in the case of dairy products and vaccine. It is extremely important that these peculiar remedial agents should be supplied to the profession of standard quality and uniform strength and entirely free from tubercle bacilli or other infectious material.

[1]Auld, British Medical Journal, January 18, 1896.

[1]Grimshaw, Liverpool Medico-Chirurgical Journal, January, 1895.

[2]American Journal of the Medical Sciences, Philadelphia, 1880, V. S., lxxx, p. 17.

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TETANUS IN THE LIGHT OF MODERN RESEARCH.

From the earliest times the nature of tetanus has been shrouded in mystery, and even until the latter part of the present century there was much uncertainty regarding it. The disease has been known to occur in all climates, in all times, at all periods of life, during war and peace, but especially in time of war, and has been regarded as closely associated with gun shot wounds. The aborigines of tropical countries are especially liable to tetanus. The nervous phenomena which play so important a part led to the confounding of tetanus with meningitis, cerebro-spinal fever, eclampsia and other affections.

To the French school we are probably indebted for a proper understanding of the disease. Verneuil drew attention to its infectious character, demonstrating its frequency in horses, and insisting that it was conveyed by these animals to man.

To-day tetanus is regarded, under the light of modern investigation, as a disease due to the toxin of the tetanus bacillus, which excites a nervous irritation beginning at the cerebral nervous system, and inducing powerful toxic contraction of the muscles. The bacillus was first discovered by Nicolaier, afterwards by Rosenbach, and Kitasato was the first to make pure cultures.

Nicolaier found that particles of earth the size of a pea taken from a street in Gottengen, when subcutaneously introduced into the tail of a mouse produced tetanus after a few days, and that other mice could at a later period be infected from the first mouse. These experiments have been repeated in most countries and it is now established that the bacillus is pretty generally distributed in the upper layers of the earth, especially in the earth of stables or streets, in gardens fertilized with animal manure, and in earth near polluted streams. Certain soils retain the bacilli for long periods, and it has been stated that the natives of New Caledonia and the Hebrides were accustomed to tip their arrows with earth from certain localities which produced violent tetanus.

Though the disease is clearly infectious it is not communicated from one person to another except by direct inoculation. The tetanus bacillus, its spores or its toxines enter the body through a broken surface, an abrasion of the skin, or a wound of any kind. Hence we find many cases resulting from splinters entering the bare feet, or hands, kicks from horses, contused wounds from the passage of heavy wagons, etc. Rusty nails are supposed by the laity to be especially dangerous, but the danger does not lie in the rust, but in the dust or earth which covers the nail and may possibly contain the bacilli of tetanus.

Of 145 reported deaths resulting from our barbaric manner of celebrating the Fourth of July eighty-three were caused by tetanus, and the injuries were almost exclusively wounds of the hands caused by pistol shots or firecrackers. In this city (Minneapolis) five cases have occurred during the past two months, four of them proving fatal.

Now that we know the cause of tetanus, it is of the utmost importance that we should apply our recently acquired knowledge to the diagnosis prophylaxis and treatment of the disease.

The tetanus bacillus is club-shaped, or like a small pin, the oval spore occupies one end of the rod and serves as the head, while the slender body of the bacillus forms the rest of the pin-shaped structure.

The spores are very tenacious of life. Absolute drying even for months in the dessicator does not destroy them. Steam at 100° C. kills them in five minutes, but they resist moist heat at 80° C. for one hour. Immersion in five per cent. carbolic acid kills them in fifteen hours, but at the end of ten hours they are not affected. It is very difficult to destroy the bacilli of tetanus by our ordinary methods of sterilization, hence we might naturally fear that the disease would follow surgical operations. As a matter of fact it rarely does, for the bacilli alone cannot produce the disease without at the same time a weakening of the tissues especially by the bacteria of suppuration. Perfect asepsis in the treatment of wounds is one of the strongest safeguards against tetanus. A wound which has been defiled with earth, dust, manure or other impure matter, should be cleansed and disinfected with scrupulous care. A small abrasion or puncture should not be made light of, but treated with as much regard to detail as a large wound. Wounds of the feet require special attention, as also do those of the hands. Wounds of the head and neck are seldom followed by tetanus. The domestic habit of applying clay or cobwebs to a bleeding wound is mischievous, as they may contain bacilli. Horses are especially liable to tetanus, and in the event of an outbreak, the infected stable should be thoroughly cleansed, all currycombs used on the infected animal, all bedding and utensils, should be burned.

Encouraged by the good results following the treatment of rabies and diphtheria by antitoxines, Roux and Nocard, Tizzoni and Behring have employed antitetanic serum and succeeded, in animals, in preventing the outbreak of tetanus before and after infection. Horses are very liable to tetanus after castration, but experiments go to show that horses treated with serum before castration or hoof operations are never attacked by tetanus. Injections of one per cent. carbolic acid in normal salt solution, or in artificial serum, are recommended for use near a wound which is suspected may be a source of tetanus.

The preparation of antitetanic serum is rendered difficult by the extreme virulence of the tetanic poison, which is so potent that a few grains of it would destroy a whole army. The preparation of this serum by the largest establishment in the United States, that of Parke, Davis & Co., of Detroit, is as follows:

The germs of tetanus are secured from fresh soil and cultures are made in an atmosphere of hydrogen. The toxin generated by the growth of the germs is injected into horses, beginning with a very small dose, and gradually increasing the amount until the animals can withstand many times the fatal dose of toxin. When this point has been reached the blood of the animal is known to be highly charged with antitoxin, which is the natural antidote of the toxin of tetanus. A quantity of blood is now drawn, the clot is separated from the fluid portion, and the latter, which is now known as antitetanic serum is put in hermetically sealed glass bulbs of a capacity of 10 c.c. each.

Antitetanic serum has been used in three ways:

I. By hypodermic injection after the symptoms of tetanus have appeared.

While this is the method which would naturally suggest itself it is not the most scientific, nor has it proved the most satisfactory. In tetanus, as in diphtheria, the peculiar phenomena of the disease are caused, not by the germs themselves, but by the absorption of virus or poison which is produced by the germs. This poison, or toxin, as it is called, can be separated from the germs, and when injected into animals will produce tetanus. Very few of the germs are absorbed at all. They remain in the soil of the fresh wound, where they grow and generate their peculiar poison, in greater or less amount according to the severity of the injection. The poison, when taken up by the circulation and carried to the nerve centers in the brain, gives rise in a few days to the characteristic symptoms of lockjaw. This explains why the earlier attempts to treat lockjaw with serum were productive of so little good. The seat of the trouble, after the disease sets in, is not in the wound, nor in the blood, but in the important nerve centers in the brain where the poison has been conveyed by the circulation. When the serum was used by injecting it under the skin it did not reach the seat of the trouble. It remained

in the blood, while the toxin is extracted from the blood and "fixed" by the nerve cells. The evidence obtained from cases treated in this way would lead us to infer: 1st, that injections have not been resorted to until the disease had been well advanced, that is, until most of the poison had been "fixed" by the nerve cells, hence the treatment failed to yield good results; 2d, while the acute and severe cases are unaffected by the serum, mild cases, and those of short incubation, are more likely to recover than under antispasmodics; and 3d, the only hope of success from the hypodermic use of serum lies in its early employment, while the disease poison is still in the blood and before it has been conveyed to the brain.

II. By intracranial injection.

Roux and Borrell, dissatisfied with the results of the hypodermic use of serum injected it directly into the brain tissue through a small trephine opening in the skull. After most encouraging results in their experiments on animals, the method was used on human beings. Dr. Emory Lanphear of St. Louis (Am. Jour. of Surgery and Gynecology), has collected twenty-two operations for intracerebral injection of serum with thirteen deaths, and nine recoveries, or a death rate of 59 per cent., while the ordinary mortality of tetanus is 80 per cent.

As an offset to the objections which might be urged against the intercerebral injection of serum, it may be stated that the risks are really trivial. The injection should be made in a neutral area such as the anterior part of the frontal lobes; the quantity of serum should be small. The fine hypodermic needle produces but slight trauma, and the button of bone being small the opening is speedily repaired. In all cases hypodermic injections are given in addition to the intracranial.

III. As a preventive of tetanus.

The immunizing effect of antitetanic serum is almost perfect. M. Nocard experimented on 375 animals by infecting them with the poison of tetanus. Before a sufficient time had elapsed for the disease to develop antitetanic serum was administered to each animal. As a result not a single case of tetanus occurred among the entire number. At the same time M. Nocard had under observation fifty-five wounded animals that also had been similarly infected everyone of which succumbed to the disease.

Here then is the ideal method of using the serum. When it is given hypodermatically immediately after a suspicious injury, it meets the tetanic poison in the blood and neutralizes or antagonizes its effects so that tetanus does not develop. Already many French surgeons, when called upon to treat a person in whom tetanus may occur, immediately make an injection of antitetanic serum in addition to the usual surgical treatment of the wound itself, and it is quite probable this will become a routine practice in hospitals.

Antitetanic serum when properly prepared is perfectly harmless to the human organism, and in favor of using it as a preventive there is this argument, that it requires thousands of times as much antitoxin to cure an animal after the symptoms of tetanus have appeared, as it does to prevent the development of the disease, by giving the antitoxin soon after the animal is infected and before the disease has made itself manifest. We predict that the day is at hand when the patient will insist upon and the surgeon will readily grant this protection in all injuries which are specially liable to be followed by tetanus, such as gunshot wounds of the hands, splinters in the feet, wounds caused by kicks of horses, and all injuries which might in any way have been infected with the tetanus bacillus.

THE MINNESOTA NATIONAL PARK.

The organization of the Minnesota National Park and Forest Reserve Association has just been completed in Chicago. Public men in all parts of the country have taken an active interest in the movement. Dr. Cyrus Northrop, of the State University, has been chosen president of the association and Governor Roosevelt, of New York, its first vice president; Judge Lurton, of Tennessee, and Judge Hubbard, of Iowa, respectively, second and third vice presidents; Colonel John S. Cooper, of Chicago, its corresponding secretary; Dr. H. M. Bracken, secretary of the Minnesota State Board of Health, recording secretary; and the Hon. J. H. Whitbeck, of Chicago, treasurer. In its executive body, the Minnesota membership predominates with fit consideration for the fact that this state is primarily interested and that much of the campaign work which must be done toward the attainment of the Park will be done here.

Medical men have been given a prominent place in the organization in due recognition

of the initiative which the medical profession of Minnesota has taken in behalf of the Reserve.

But the profession must not stop with that initiative. The creation of a National Park in Northern Minnesota is pre-eminently a public health question. It is not only that. It has among its many objects, all of which are of a magnitude which grows in their relation to the future,—the reservation of the last great area of virgin forest remaining in the west and northwest, the preservation of native and imported game, and the protection of the head-waters of the Mississippi. Economic arguments might be urged at great length in support of each of these major reasons for the projected reserve. But the work which the medical profession has before it in this great undertaking, the work to which it is logically called, is inspired by its appreciation of the sanitary possibilities of the pine forests and the porous soil and the pure, dry air of northern Minnesota, and by its ambition to make this great region, not only an object lesson in practical forestry, not merely a sportsman's paradise, not only a permanent reservoir of the river, but a natural sanitorium for the open-air treatment of tuberculosis and of other forms of constitutional disease. There is every reason to believe that our northern park district can rival and combine the advantages of the Black Forest, the Blue Ridge and the White Mountains in their health-giving qualities. An opportunity is at the hands of the profession which, if not quickly seized, soon will pass by forever, to make in Minnesota the Nordrach of the northwest.

R. O. BEARD.

CONTENT WITH MOSQUITOES.

A "Kissing Bug," so-called has been giving our northern friends some trouble lately. Its bite gives rise to quite a severe phlegmonous inflammation, and in one case at Louisville has caused death. It is thought by some to be the new horse fly, created to go with the "Automobile." Be that as it may, we in the south are content with our mosquitoes and ask no immigration from Mr. "Kissing Bug."—Jour. Miss. S. M. A.

It is said that when the application of carbolic acid to the skin is followed within a few seconds by the application of alcohol, the caustic effect of the former is prevented. The same is true if alum, or any soluble sulphate is used.

Reports of Societies.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

With the near approach of the annual meeting of the American Electro-Therapeutic association, to be held September 19, 20 and 21, in the city of Washington, under the presidency of Dr. F. B. Bishop, the local committee of arrangements is redoubling its efforts to make it a success. Many electrical manufacturers will be represented in the exhibit hall, and information will be freely given. Papers have thus far been promised from Drs. R. G. Nunn, A. D. Rockwell, Margaret A. Cleaves, F. J. Leviseur, Walter White, Robert Reyburn, G. A. Corson, C. O. Files, J. H. Kellogg, John A. Licthy, W. W. Scheppegrell, L. Howe, E. Wende, F. B. Bishop, Robert Newman, W. J. Herdman, G. B. Massey, and Profs. Bergonie of Bordeaux, Apostoli and Dolbear of Paris. With such authors, a successful meeting must result.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

The twenty-fifth annual meeting of the Mississippi Valley Medical Association will be held in Chicago, October 3, 4, 5, and 6, 1899, under the presidency of Dr. Duncan Eve, of Nashville, Tenn. The local arrangements are in charge of Dr. Harold N. Moyer, ably assisted by an excellent committee. Elaborate arrangements have been made for the entertainment of the members, and a special feature will be a series of clinics in every department of medicine and surgery, given in honor of the association, at all the colleges and hospitals. Dr. J. A. Witherspoon, of Nashville, Tenn., will deliver the address in Medicine, and Dr. H. H. Mudd, of St. Louis, the address in Surgery. There will be two sections: a medical and a surgical. There will be a flat one-fare round-trip rate, without certificates, on account of the Autumn Festival to be held in Chicago.

OFFICERS:

President, Duncan Eve, Nashville.

First Vice-President, A. J. Ochsner, Chicago.

Second Vice-President J. C. Morfit, St. Louis.

Secretary, Henry E. Tuley, Louisville.

Treasurer, Dudley S. Reynolds, Louisville.

Chairman Committee Arrangements, H. N. Moyer, Chicago.

PROGRAM:

Address in Medicine, Dr. J. A. Witherspoon, Nashville.

Address in Surgery, Dr. Lewis S. McMurtry, Louisville.

MEDICAL SECTION.

1. Enzymes and Immunity, Chas. T. McClintock, Detroit.
2. Recent Physio-Chemic Researches as to the Physiologic Action of Lecithin and other Organic Phosphorous Compounds, L. H. Warner, Brooklyn, N. Y.
3. Communal Hygiene, Ernest B. Sangree, Nashville, Tenn.
4. Some Phases of Malaria—Quinine In, Wm. Britt Burns, Deckerville, Ark.
5. The Treatment of Pulmonary Tuberculosis by Inhalation of Antiseptic Nebulæ, Homer M. Thomas, Chicago, Ill.
6. The Management of Cases of Pulmonary Phthisis at Health Resorts, Chas. F. McGahan, Aiken, S. C.
7. The Treatment of Acute Lobar Pneumonia, Ramon D. Garcin, Richmond, Va.
8. The Art of Diagnosis, E. L. Larkins, Terre Haute, Ind.
9. Do We Need to Think? Wm. O'Neall Mendenhall, Richmond, Ind.
10. The Evils: Their Causes, and the Remedy that will Edify Medicine in the United States, A. M. Osness, Dayton, Ohio.
11. Two Cases of Typhoid Fever with Unusual Complications, in Very Young Children, E. B. Montgomery, Quincy, Ill.
12. Further Observations on the Treatment of the Abdominal Viscera Through the Colon, Fenton B. Turck, Chicago, Ill.
13. Report of a Case of Complete Hernia of the Pregnant Uterus, M. V. Anderson, Toledo, Ohio.
14. Leptomeningitis, Frank Parsons Norbury, Jacksonville, Ill.
15. Pathogenesis of Functional Nerve Diseases and Its Prophylactic Indications, John Punton, Kansas City, Mo.
16. The Association of Hysteria with Organic Disease of the Nervous System, Philip F. Zenner, Cincinnati, Ohio.
17. The Clinical Psychiatrist in General Practice, C. H. Hughes, St. Louis, Mo.
18. Temperament and Its Influence, Albert E. Sterne, Indianapolis, Ind.
19. Obstipation and Its Radical Treatment, Thomas Charles Martin, Cleveland, O.
20. Intestinal Auto-Intoxication, its Prevention and Treatment, Wm. F. Barclay, Pittsburgh, Pa.
21. Indigestion in Infants and Children, James H. Taylor, Indianapolis, Ind.
22. Lithiasis, R. Alexander Bate, Louisville, Ky.
23. Nephrolithiasis, A. H. Cordier, Kansas City, Mo.
24. The Therapeutics of Infectious Conjunctivitis, Dudley S. Reynolds, Louisville, Ky.
25. Supra-renal Gland as a Therapeutic Agent in Ophthalmology, Otology and Rhinology, Flavel B. Tiffany, Kansas City, Mo.
26. Introversion of the Iris, L. W. Beardsley, St. Louis, Mo.
27. The Successful Treatment of a Case of Graves' Disease as an Auto-Intoxication, Charles L. Minor, Asheville, N. C.
28. The Treatment of Dysentery, J. W. Knowlton, Paint Rock, Ala.
29. A Contribution to the Study of Lung Reflexes, Marion K. Bowles, Joliet, Ill.

SURGICAL SECTION.

30. Vesico-Rectal Anastomosis, J. Frank, Chicago, Ill.
31. Intolerant Ulceration of the Rectum, with the Report of Five Cases, Sterling B. Taylor, Columbus, Ohio.
32. Modern Surgical Treatment of Hemorrhoids, G. M. Blech, Chicago, Ill.
33. An Arm Saved after being Run Over by a Railway Locomotive and Crushed, S. L. Kilmer, South Bend, Ind.
34. Urethral Endoscopy, W. R. Blue, Louisville, Ky.
35. The Value of Prostatic Examination, J. Leland Boogher, St. Louis, Mo.
36. The Technique of Abdominal Incisions, Peritoneal and Extra-Peritoneal, S. E. Milliken, Dallas, Tex.
37. Mammoth Ovarian Cysts: Report of a Tumor weighing 245 Pounds, Jas. B. Bullitt, Louisville, Ky.
38. Some Causes of Death after Abdominal Section, Louis Frank, Louisville, Ky.
39. Intestinal Obstruction from Gall-Stones, J. Wesley Bovee, Washington, D. C.
40. Obstructive Growths of the Pylorus, with Report of a Successful Case of Pylorectomy, J. E. Allaben, Rockford, Ill.
41. What Becomes of the Medicinally Treated Cases of Appendicitis? Lewis Schooler, Des Moines, Iowa.
42. Appendicitis from a Medical Standpoint, I. N. Love, St. Louis, Mo.
43. A Plea for Early Operation in Appendicitis, A. M. Hayden, Evansville, Ind.
44. Surgical Features of Appendicitis, Hal. C. Wyman, Detroit, Mich.
45. A Study of Twenty-seven Cases of Appendicitis, Frank T. Merriwether, Asheville, N. C.
46. Surgery of the Turbinated Bones, J. A. Stucky, Lexington, Ky.
47. Nasal Stenosis Due to Defective Septa, and Its Treatment with or without Thickening of the Convex Side, John J. Kyle, Marion, Ind.
48. Mastoid Operation, with Report of Cases, Geo. F. Keiper, Lafayette, Ind.
49. Beta-eucaine as an Anesthetic in Eye Surgery, W. H. Poole, Detroit, Mich.
50. The Surgical Treatment of Chronic Frontal Sinusitis, Richmond McKinney, Memphis, Tenn.

51. Observations on Surgery of the Brain, Based on Clinical and Experimental Evidence, Geo. W. Crile, Cleveland, Ohio.

52. Removal of the Cervical Sympathetic for Epilepsy, Exophthalmic Goitre, and Glaucoma, Emory Lanphear, St. Louis, Mo.

53. Treatment of Certain Ocular Diseases by Excision of the Cervical Sympathetic Ganglia, James Moores Ball, St. Louis, Mo.

54. Suture Materials in Surgery, Jos. Price, Philadelphia, Pa.

55. The General Treatment of Patients Before, During, and After Surgical Operations, Fenton B. Turck, Chicago, Ill.

56. The Modern Small Bore Projectile, Aug. Schachner, Louisville, Ky.

57. The Effects of the Automatic Mauser Pistol, J. D. Griffith, Kansas City, Mo.

58. Surgical Tolerance and Results, F. F. Bryan, Georgetown, Ky.

59. The Treatment of Gonorrhea in the Female, A. Ravogli, Cincinnati, Ohio.

60. Inflammation of the Verumontanum, Indianapolis, Ind.

THE AMERICAN PROCTOLOGICAL SOCIETY.

A new organization was recently perfected in Columbus during the session of the American Medical Association for a study of rectal diseases, and its membership is composed of numerous prominent rectal specialists, among them the following: Joseph M. Mathews, Louisville; Joseph B. Bacon, Chicago; Leon Straus, St. Louis; B. Merrill Ricketts, Cincinnati; Thomas Charles Martin, Cleveland; S. G. Gant, Kansas City; J. Royal Pennington, Chicago; James P. Tuttle, New York City; Samuel T. Earle, Baltimore; Lewis J. Adler, Jr., Philadelphia; Charles C. Allison, Omaha; A. Bennett Cooke, Nashville; George J. Cook, Indianapolis; George B. Evans, Dayton, Ohio; Wm. M. Beach, Pittsburg.

The new society starts out with the following well-known physicians as officers: President, Joseph M. Mathews, Louisville; vice-president, James P. Tuttle, New York City; secretary-treasurer, William M. Beach, Pittsburg; board of councilors, Samuel T. Earle, Baltimore; A. Bennett Cooke, Nashville, J. Royal Pennington, Chicago.

The next meeting will be held at Washington, D. C., in May, 1900.

It seems that the remains of the late Dr. Lawson Tait, of England, were cremated, and the ashes are to be deposited in Gogarth's Cave, one of the ancient burial places of Wales.

Someone has cleverly estimated that the quantity of beer consumed in a single year throughout the world would make a lake six feet deep, a whole mile wide, and three and three-quarters miles long.

Progress of Medicine.

MEDICINE.

UNDER THE CHARGE OF
J. W. BELL, M. D., C. H. HUNTER, A. M., M. D.
J. H. STUART, A. M., M. D.
DAVID OWEN THOMAS, M. D., M. R. C. S.

THE NECESSITY OF TUBERCULOSIS SANATORIA FOR THE PEOPLE.

Sir Hermann Weber, M. D., F. R. S., of the German Hospital, London, and the Royal National Hospital for Consumptives, Ventnor, in an address before the International Tuberculosis Congress at Berlin in May last, said:

"The cure of tuberculosis during the early stages is possible in all healthy climates; some climates, however, have advantages for various cases over the other climates; for instance, notably those of high altitude. But climate by itself, without careful medical supervision, is generally insufficient. The patient's blind reliance on climate often leads to errors, to aggravation of the disease and to death. For the majority of patients, therefore, treatment in sanatoria should be preferred, but for the treatment of the poor it is a necessity. The erection of numerous sanatoria for the people is therefore a national requirement for the cure, the prevention and extermination of tuberculosis."—Boston Med. and Surg. Jour.

J. H. S.

RESULTS OF SANATORIAL TREATMENT OF PHTHISIS PULMONALIS.

Dr. V. G. Bowditch, Boston, makes report (Boston Med. and Surg. Jour., June 22, 1899) of the subsequent histories of thirty-six cases of arrested consumption treated at the Sharon Sanitarium near that city from February, 1891, to September, 1898. Two of these cases are omitted from the details because they were in the hospital so short a time, and had left it so recently. Of the remaining thirty-four cases six have died, one has not been heard from lately, twenty-four are apparently well and are actively at work, three had slight returns of symptoms, adopted similar methods of treatment, are active, and to outward appearances are well again. The average time of remaining in the sanitarium was about thirteen months, ranging from six weeks to thirty-two months.

Such favorable results very naturally, when compared with the experience of most practitioners, suggest the query whether there might not have been some mistake in the diagnosis of some or most of these cases, and whether the trouble was not other than tubercular.

The tabular statement accompanying the report is very lucid and full as to the conditions, symptoms and histories of these thirty-four cases. It includes general symptoms at time of entrance, stage of the disease, part affected, presence or absence of bacilli in the sputa.

All had cough ranging from some months to a number of years, with characteristic sputa, loss of strength, loss of flesh, malaise. A number reported bad family histories, and one-fourth of them hemoptysis. There was dullness at one or both apices, or elsewhere, and broncho-vesicular respiration, moist, faint, or clicking rales.

It must be remembered that the cases included in this report were incipient or primary cases, neither accompanied by excessive tubercular infiltration nor by cavities. Such results are not in anywise to be expected in the later or secondary class of cases.

The symptoms given are characteristic of the early stages of this disease, and it is true that the beginnings of consumption may be established even before such evident symptoms can be recorded as are to be found in all of these thirty-four cases. Besides, the bacilli were found in twelve of these cases, and the physical signs in the others were similar to those, which, under unfavorable hygienic conditions, we usually find develop bacilli in the sputa later.

In a word, every one of these thirty-four cases, if left to remain in the unfavorable hygienic conditions in which the existing symptoms developed, was morally certain to progress into established consumption.

Not the least interesting part of this report is the short contained histories of the six fatal cases. As to conditions, etc., they were an average of the thirty-four cases, whilst in the sanitarium the cough and other symptoms left them, they gained in flesh and improved as the others did, but, in part of them, the fatal issue was doubtless due to their unwisdom in returning to the unhealthy environments from which they were taken, and in others to grave complications.

The average time since the discharge of the twenty-eight favorable cases has been near two and one-half years, and the excellent condition under all circumstances of this number greatly justify Dr. Bowditch in believing, or entertaining the hope, that incipient phthisis can be arrested and remain so in a good per centage of cases, even in the insalubrious climate of New England, near a large city, not far from the sea, at no special altitude, in a changeable, damp climate, with no pretense at the selection of a region specifically suited for lung troubles other than what may be found in almost any hilly town, namely, a southern exposure on gravelly soil, as free as possible from dampness, and with protection by hills and woods from the harshest winds. His wish is to stimulate the growing conviction that similar institutions are needed throughout the country.

As to methods pursued at the sanitarium at Sharon, Dr. Bowditch says: "Although two or three of the so-called 'specifics' have been resorted to occasionally, the chief factors in the treatment have been the insistence of fresh air, judicious exercise, and good, wholesome food, medicines having been used somewhat sparingly, and as mild adjuncts for general treatment only. Lasting results can be accomplished only when patients are not allowed to go back to former unhealthy conditions."

J. H. S.

OBSTETRICS.

UNDER THE CHARGE OF

A. B. CATES, A. M., M. D. R. E. CUTTS, B. S., M. D.

TREATMENT OF PUERPERAL FEVER.

Dr. Herbert Spencer. Read before the Section of Obstetrics of the British Med Ass'n. (British Med. Jour., Aug. 5, 1899.)

He divided fevers following delivery into four groups: First, the so-called "one-day fevers" due to emotion or other transitory causes; the second, due to complication of causes, not referable to the labor, such as influenza, phthisis, typhoid fever, etc.; the third, due to infection from pre-existing pelvic lesions such as pyosalpinx, appendicitis; the fourth, due to external infection, and this is what is generally understood by "puerperal fever." Recent operations prove such fever to be often due to a number of micro-organisms. Whitridge Williams, in twenty-six cases examined, found streptococci, staphylococci, colon bacilli, gonococci, anærobic bacilli, diphtheria bacilli, and typhoid bacilli.

In discussing the prophylaxis, Dr. Spencer did not think it necessary for a physician to abstain from practice when attending such cases, as a thorough disinfection would immediately enable him to attend other women with safety. Aside from the surgical treatment, he pointed out other methods of remotely influencing puerperal fever, such as: nuclein treatment, saline infusion into the cellular tissue and intra-venous injection of antiseptics. In speaking of the serum treatment, he pointed out the report of the Com. of the Am. Gyn. Society, which showed a mortality of 33 per cent. in over 350 cases collected. Probably the natural mortality was not greater than this.

The conclusions reached were: First, that as usually applied, serum therapy in the treatment of puerperal fever has no scientific basis; second, that it has not lowered the mortality; third, that it generally lowers the tem-

perature, and sometimes improves the condition; fourth, that its use is not free from danger.

Following this paper Dr. Whitelocke read notes of two cases of puerperal fever in which he believed that great benefit resulted from the use of the serum. R. E. C.

PUERPERAL ECLAMPSIA.

Dr. Horace Savory (British Med. Jour., July 15, 1899) reports a case of puerperal eclampsia. The points of interest were that it was a second attack and non-fatal, though severe; that it was accompanied by hæmoglobinuria and very obstinate constipation; that loss of consciousness lasted nine days, but was suddenly regained when the bowels had been relieved of a quantity of very dark, evil-smelling fæces.

He had collected notes of sixty-four published cases and quoted some to show that copræmia frequently accompanied eclamptic seizures, and mentioned several recoveries where free purgation had been the only treatment used. In his case not only were the bowels loaded, but the liquor amnii was full of meconium, as thick as jelly.

He suggested that these two conditions might be factors in the production of the eclamptic toxin. The hæmoglobinuria, he thought, was comparable to that which sometimes occurs after excessive muscular exertion. He thought that the excessive muscular effort of the uterus might account for the breaking down of the red corpuscles and the appearance of the hæmoglobin in the urine. The patient had no signs of renal disease or urinary obstruction. R. E. C.

PEDIATRICS.

UNDER THE CHARGE OF

H. B. SWEETSER, M. D. J. P. BARBER, M. D

TREATMENT OF SUMMER DIARRHEA IN CHILDREN.

Under the above title a symposium of articles by five of the leading pediatrists of the East appeared in The Therapeutic Gazette for August 15th. There is a remarkable unanimity of opinion by these men, all of whom have a wide experience both in hospital and private practice, as well as in teaching diseases of children. Stress is laid by most of them on the hygienic management of the child, the manner of feeding and character of the food in those not breast-fed, as prophylactic measures. Irrigation of the stomach, when required, and of the bowels always is given the first place in the treatment.

Jacobi describes these processes minutely: "The irrigation of the stomach meets with almost no difficulties in the young; an elastic catheter (20 or 30 French) is sufficient. In very rare instances the nostril (mostly the right) may be used. Salt water (7:1000) may be poured through the tube from a funnel connected with it, or from a fountain syringe, which is slightly raised above the level of the pharynx, and lowered when the fluid and stomach contents are to flow out. This salt water may be mixed with a disinfectant, either thymol 1:3000–1:4000 or resorcin 1:1000, or in case of known hyperacidity with bicarbonate of sodium, 1:200–500. The temperature of the irrigation should be that of the body when this is normal, cooler when there is great elevation, or warmer when there is reduction of the body temperature. Alcohol should not be added to the injection because its mixture with water is liable to be rapidly absorbed by the stomach. On the other hand, when water is injected without salt, it causes osmosis of the body fluids into the stomach, sometimes to such an extent as to visibly increase the amount returning from the stomach. The irrigations should amount to 100 and more c.c. in the nursling, 200 or 300 in the child, and should be repeated until the liquid returns clear. The tube should always be withdrawn quickly, so that irritation of the fauces may be avoided.

"Irrigation of the intestinal tract is mostly performed while the patient is on his back or side with gently raised hips. The nozzle of the irrigator (fountain syringe) or of the tube connected with a funnel is introduced a few centimeters beyond the internal sphincter. Long tubes are generally useless; even in the case of adults, with normal sigmoid flexures, the reports of the introduction of a tube to a distance of from twenty-five to fifty centimeters should be accepted with caution, for stiff tubes are able to raise the intestine and may be felt in the hepatic region, while a flexible tube is liable to turn upon itself. That is more so in infants and children, in whom the sigmoid flexure is multiple and can rarely be passed by an instrument. In some cases it is advisable to raise the lower half of the body considerably, according to the method I have followed these thirty years to reduce intussusception, and to support the abdomen on a soft pillow, while the face is turned to one side to facilitate respiration. While the anus is firmly closed the liquid is allowed to flow in from a slight elevation, from ten to fifty centimeters (four to twenty inches). A greater elevation raises the pressure to an unbearable point, and the gut is no iron pipe. A slight elevation will improve the tolerance of the intestinal tract, which may thus be filled to the ileo-cæcal valve and beyond; in very exceptional cases even to the stomach. It is only an abnormal intestine, dilated in places or bound down by previous adhesions or abnormally sensitive, that resents of the fluid by spastic contractions or by pain or vomiting. The indication of a greater or

smaller elevation is guided, in special cases, by the object to be attained. Part of the liquid—particularly when saline—is absorbed, and sometimes very quickly. That is why when that is not desirable (mostly with the first irrigation when cleaning of the gut is the only indication) the irrigator should be raised high. Then the intestine fills up more rapidly, and the return of the fluid with the contents of the bowels is more readily secured. From one pint to two quarts of water should be used in the first irrigations. When it is desirable to secure retention and absorption of the fluid, in collapse or when brain symptoms make their appearance, the later irrigations should be smaller. Tepid or cool water should be used when there is hyperthermy, water of the temperature of the body when this is normal, hot water when there is hyperthermy with or without collapse. Medicinal agents may be added to the water; for instance, thymol or permanganate of potash 1:3000–1:4000 solutions, or subnitrate or subgallate of bismuth, of which one or two teaspoonfuls may be stirred up with a pint of water. The addition of gum acacia to the injection, or the use of glutinous decoctions, such as flax seed, instead of water is preferred by many when there is tenesmus. Starch injections (the starch to be boiled before being mixed) have the advantage of adding to the nutrition of the body by the facility with which the colon changes amylum into dextrin, which will be absorbed. Part of the injected water will always be absorbed, fill the blood vessels, and may prevent intracranial and other thromboses. Indeed, in many bad cases in which the cerebral symptoms of the hydrencephaloid condition have made their appearance, or are imminent, frequent injections into the rectum of a few ounces of warm fluid contribute considerably to the restoration of circulation."

All agree that purgatives should be given in the beginning of acute cases to assist in completely emptying the intestinal tract. Castor oil and calomel are given preference; the former in one or two teaspoonful doses, of the latter one-half to two grains are given in divided doses. Colomel is preferred when vomiting is present. Withdrawal of all food for a few hours and of milk entirely for a few days or a week or more, according to the symptoms, is emphasized by each one. The substitution of farinaceous decoctions, beef-juice, albumen water, gelatin water, etc., for milk is recommended.

After the bowels have been thoroughly emptied, bismuth seems to be the favorite medicinal agent for the resultant ileo-colitis. Salol is mentioned by nearly all, and silver nitrate by one or two of the writers. Jacobi praises resorcin. On this subject he says:

"The answer to the question whether disinfection of the alimentary canal may be accomplished by internal medication should not be left to bacteriologists, but to clinical observers, who are nearly unanimous as to the good effects that can be obtained by it. Resorcin in doses of one-fourth grain or a little more every two hours, usually with some other indicated drug, has been of great service to me. Its solubility does not militate against its usefulness in the intestine, for though the stomach dissolves it, it does not absorb it any more than, with few exceptions, it absorbs anything."

Other remedies mentioned are opium, beta-naphthol-bismuth, silver nitrate, calomel and alcohol. The indications for opium, it is generally agreed, are the relief of pain, tenesmus and excessive peristalsis after the bowels have been emptied. Griffiths is the only one to mention giving opium in the first stages of the disease, except to condemn it. After pointing out the dangers of its use at this time, he says:

"On the other hand, the child is sometimes weakened to such an extent by a profuse discharge from the bowel that the checking of this by any means possible is the first indication. I know of nothing requiring more judgment than the decision whether or not to give opium in certain cases."

Only one of the authors, Fischer, mentions hypodermoclysis in collapse. Whether or not the omission was intentional on the part of the others, it is certainly true that the indication for this procedure in certain cases of collapse can be met in no other way. J. P. B.

RESEARCHES ON INDICANURIA AND PHENOLURIA IN THE DIGESTIVE INTOXICATION OF CHILDREN.

(E. Thomas, M. D., Pediatrics, July, 1899.)

The more the disassimilation products of the albuminoid materials are studied, the more is it apparent that these problems of biologic chemistry have a great importance in the life of the individual. Yet it must be admitted that present knowledge on these subjects is the property of the few, and that the great majority of practitioners entirely ignore this study.

To state what is actually known:

(1) The presence of these substances in the urine is the result of putrefaction of the albuminoid contents of the intestine.

(2) The indol and phenol are converted into sulfo-conjugate acids, which are said to be not very toxic, a view which the author is not prepared to accept.

It is important to know the organs in which this transformation of albuminoid occurs. Koch's experiments indicate that the liver plays an important part in the formation of the phenols, while the latest researches give the intestine as the place of origin for indol.

There seems to be a close relationship between indicanuria and glycosuria. Further, it appears that the liver, through the bile or

otherwise, plays an important part in either preventing the formation of indol in excess or of destroying it after it has formed.

Concetti arrived at the following conclusions:

(1) Any disease which produces a slackening of the functions of the digestive organs is accompanied by a great increase in the amount of indican.

(2) Tuberculosis acts only indirectly, through a weakening of the digestion.

(3) A diminution or absence of hydrochloric acid in the gastric juice increases the quantity of indican unless lactic acid is in excess. The antiseptic value of gastric juice is therefore of great importance.

(4) Constipation has no influence.

In these cases of weakening of the digestive functions, anto-intoxication, due to intestinal poisons—i. e., indol, phenol and ammonia in excess—occurs; and this intoxication, after a greater or less interval, leads to liver and kidney troubles, often with serious alterations of these organs.

As a rule the symptoms are various and indefinite, relating both to the digestive organs and to the general condition. There are usually anarexia, vomiting, restlessness, anæmia, some emaciation, muscular weakness, imperfect development, neurosthenia, headache, in one case asthma and in another false hepatic crises.

The diagnosis can only be made from an examination of the urine. The treatment must be directed to the general state, and the endeavor made to modify the constitution and lead the organism to act in a stronger way. For this purpose the author insists on moderate exercise, out-of-door life, nutritious, easily-digested food, and baths (salt and sulphur). The drugs he relies on are hydrochloric acid and benzo-naphthal, the latter in frequent small doses.

The author reports at length five cases which form the basis for the above remarks, all of them successfully treated. Altogether the paper is very interesting and very suggestive.

Sweetzer.

TREATMENT OF CONSTIPATION.

Each evening, before retiring, an injection of plain water is to be taken and retained. The size of the injection is gradually increased from 8 oz., the beginning amount, to 24 oz., and the temperature of the water is gradually lowered until 68 deg. F. is reached. The duration of the treatment is from four to six weeks. —La Semaine Med.

It is pathetically announced that the most digestible part of the doughnut is the hole in the center.

Book Notices.

TEXT-BOOK OF OPTHALMOLOGY, by Dr. Ernest Fuchs, Professor of Opthalmology in the University of Vienna, authorized Translation, revised from the Seventh enlarged and improved German edition, by Dr. A. Duane, M. D., Assistant Surgeon Ophthalmic and Aural Institute, New York, with two hundred and seventy-seven Illustrations. New York: D. Appleton and Company, 1899. Price, cloth, $5.00; sheep, $6.00; half mor., $7.00.

The above work, the second American edition from the seventh of the German, cannot fail to commend itself to all students and physicians interested in the diseases of which it treats. With the consent and approval of the author, Dr. Duane has used his judgment freely in the translation, also with sundry additions to the original, thus making points clear that otherwise might be somewhat obscure if a strictly literal interpretation had been attempted.

In the treatment by operation or otherwise of the eyes and their appendages, affected by accidents, diseases or other defects, Dr. Fuchs has a concise and clear manner of explaining the evolution of methods by which the latest and most successful results are obtained. He thus illustrates how to avoid mistakes that have been made by operations that have been tried and found useless or dangerous.

The whole book is full of useful information for the student and practitioner,, and its recommendations will be found safe to follow, founded as they are upon the skill and wide experience, both of the author and the translator, in the matters of which it treats.

ANNUAL AND ANALYTICAL CYCLOPEDIA OF PRACTICAL MEDICINE. By Charles E. de M. Sajous, M. D., and One Hundred Associate Editors, Collaborators and Correspondents. Illustrated with Cromo-Lithographs, Engravings and Maps. Philadelphia, New York and Chicago. The F. A. Davis Company, Publishers. Price, cloth, $5.00; half morocco, $6.00.

The second volume of the Cyclopedia of Practical Medicine has been issued, embracing subjects from Bromide of Ethyl to Diphtheria. There is a thorough discussion of the various bromides, and some of the dangers attending their use pointed out. In the treatment of epilepsy, especially, for which disease liberal doses and for prolonged periods have been employed, there is certainly danger of mental degeneration, although some forms of the disease are apparently benefitted for a season, and the number of fits reduced.

The subject of diphtheria, which has given rise to a vast amount of literature, is thorough-

ly reviewed by Drs. Northrup and Bovaird, of New York, and the success of the serum treatment endorsed.

In this volume physicians will find the same fullness of description with liberal quotations from the current literature of all subjects as in that of the first, and Dr. Sajous, with his one hundred associate editors, is doing a good work in publishing this Cyclopedia for the profession.

It must be a great source of satisfaction to the editor of this series of volumes, covering as it does all subjects pertaining to the practice of medicine, to know that he is held in such high esteem by the profession, as is evidenced in the last paragraph of the preface to this second volume, as follows:

"Repeated inquiries having reached the central department as regards the authorship of the fifty-four page unsigned article on 'Animal Extracts' which appeared in the first volume, the editor wishes to state that he wrote it himself, and that he fully appreciates the kindly expressions relating thereto, and also the many encouraging reviews which the medical press has accorded the first volume."

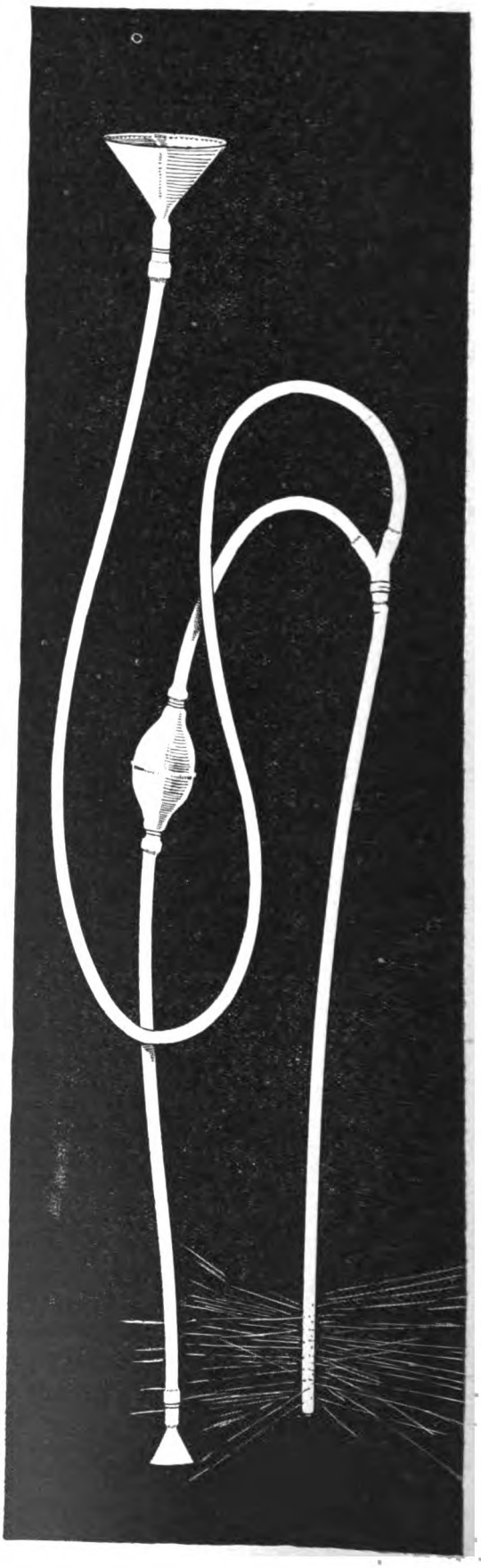
New Inventions.

A COMBINED STOMACH-TUBE AND DOUCHE.

By J. W. Bell, M. D.
Professor of Clinical Medicine and Physical Diagnosis, Univ. of Minn.
Minneapolis, Minn.

The pressing need of a more satisfactory method of securing thorough gastric lavage, as well as a more efficient means of treating atonic conditions of the gastric mucosa and muscularies is my only apology for calling attention to a new combined gastric-tube and douche.

The instrument consists simply of an inflow tube equal in size to two-fifths of the lumen of the entire tube, ending in a perforated jacket. This perforated jacket, corresponding to the last four inches of the gastric end of the tube, contains some seventy-two very small openings through which the water issues in fine streams or a coarse spray with a force corresponding to the pressure or height of the column of water in the inflow tube. The outflow tube, corresponding in size to three-fifths of the lumen of the entire tube, simply performs the functions of an ordinary stomach-tube, draining the stomach of its contents, thus enabling the small streams issuing from the small openings in the jacket to come in contact with and thoroughly cleanse all parts of the gastric mucosa.



The perforated jacket is the only portion of the instrument original or new. This jacket proved a very troublesome problem for our rubber workers to solve, and allow sufficient space for the outflow. After many failures, extending over a period of nearly two years, they finally succeeded in making a satisfactory instrument. The following points are claimed for it:

1st. The instrument is simple in construction, durable and easily operated.

2nd. It enables the operator to thoroughly and efficiently cleanse and disinfect the stomach—an impossibility with the ordinary stomach-tube.

3rd. By means of the intragastric douche we are able to stimulate and tone the gastric mucosa and muscularis.

4th. The intragastric douche, hot or cold, as indicated, is invaluable in the treatment of motor insufficiency and non-obstructive forms of gastric dilation.

THE BUBONIC PLAGUE.

The fatality of the bubonic plague in Hongkong is somewhat frightful. Out of 1,173 cases, from April 11 to June 24, 1,119 died of the disease. In Tamsul, Formosa, April 26 to May 31, there were 568 cases and 378 died. In Bombay 255 were overcome with the destroyer from May 27 to July 4. From May 4 to July 21, thirty-two died at Alexandria. In regard to the plague at Hongkong, the Hon. Rounsevelle Wildman, the United States consul-general stationed there, wrote to the supervising surgeon of the United States Marine Hospital Service, under date of July 14, as follows:

"Sir: On April 11 I cabled the Department as follows: 'Cridler, Washington: Plague.—Wildman.' At which time the plague had reached the weekly death rate of 100 and has continued at the same average rate to the present time. I had been hoping with everyone in the city that insomuch as this was the off year, and every precaution had been taken to guard against its recurrence, that it would not be necessary to frighten the people of the United States by this cablegram, as so many had brothers and husbands in the the hospitals, that the presence of plague in Hongkong is due to its proximity to the main-Philippines.

"I am informed by Dr. W. M. S. Beede, the consular surgeon who has for the last two years been experimenting with plague cases in land of China, over which the local sanitary board has no jurisdiction. The plague is entirely confined to the native population, and never attacks Europeans unless they injudiciously expose themselves, as it is always conveyed by direct infection. As an instance of this, my interpreter's maid servant, who lives in a clean, roomy, ventilated house, died this week within thirty hours, of plague, while Mr. Chin's little boy, who went with her everywhere (but wore shoes), escaped."

MORTALITY IN THE ARMY AT MANILLA.

According to the Seattle Times, says the Medical Record, the total number of deaths among United States troops in the Philippine Islands up to June 2d was 722, 23 officers and 699 privates. Of the 23 officers who died, 16 died of wounds received in battle, 2 were drowned, and 5 died of disease. Of the 699 privates, 294 were killed in battle or died of wounds there received, 9 were killed accidentally, 23 were drowned, and 7 committed suicide. One hundred and six died of typhoid fever, 89 of small pox, 47 of dysentery, 28 of pneumonia, 19 of malarial fever, and 14 of meningitis. Fourteen civilians died, three of wounds received while on the firing line, and the remainder of disease. Small pox caused some of these deaths.

Dr. I. N. Love, the versatile editor of the Medical Mirror of St. Louis, informs his readers in the August number of his journal, that the proper time to eat watermelon is when the stomach is empty, preferably at the hour of eleven in the forenoon, and at three or four in the afternoon (the "evening" of the south). He claims the melon is all right and has for many years allowed his patients to indulge in this fruit of the vine freely, but always on an empty stomach. Those who know the wonderful palatability and value of the melon can most heartily, says the doctor, join in with the refrain of Col. Alexander Jackson Stofer, the newspaper man of Washington, when he sang out with his happy combination:

"Oh the bacon it am sweet, and the ham bone it was good,
"And the 'possum it was very, very fine!
"But give me, Oh give me, Oh how I wish you would,
"That watermelon smilin' on the vine."

TREATMENT OF YELLOW FEVER.

A special correspondent of the Medical Record, writing from Brazil, says, among other things:

"Dr. George Butler, an American medical missionary, practicing in the state of Pernambuco, has reported a large number of cases treated with small repeated doses of castor oil and turpentine, and says he has not lost a case when the treatment was begun before the action of the kidneys became involved, and when yellow fever was not complicated by some other disease. His treatment is as follows: Three drops of turpentine in a teaspoonful of castor oil every hour for twelve hours, after which only once in two hours until the fever ceases."

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MED. MIRROR, ST. L.

The Management of Interstitial Nephritis, R. G. Floyd, M. D., Eureka Springs, Ark.

MED. FORTNIGHTLY, ST. L. (AUG. 15.)

Physiology (Chapter III., 13 pp., on Foods), A. L. Benedict, A. M., M. D., Buffalo.

AM. MIC. JOUR., WASH. (20)

Marine Microscopic Organisms (12 forms described, illustrated), W. H. Harris.

Making Plate and Esmarch Roll Cultures, V. A. Moore.

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Anthropological Studies, Alex. Hrdlicka, M. D.

Glimpses of School Work at Lakeville, Miss Skinner, Lakeville, Conn.

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The Eyes of School Children, F. C. Heath, M. D., Indianapolis.

Conservative Pelvic Surgery, Thomas Barker Eastman, A. B., M. D., Indianapolis.

NAT'L MED. REV., WASH. (10)

Vesical Calculus in Children: A Case of Supra Pubic Cystotomy, J. Ford Thompson, M. D., Washington.

Ventilation and Heating, W. F. Lippitt, Capt. and Ass't Surg., U. S.A.

MED. BUL., PHILA. (10)

Primary Syphilis. A Clinical Lecture by John V. Shoemaker, M. D., LL. D., Phila.

Permanent Hemiplegia of Cereoral Origin in Locomotor Ataxia, Dr. Cestan, Paris. (Translated.)

Notes from a Skin Clinic, E. S. Gans, M. D., Phila.

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Sterility in Women; Some of the Causes; Minute Lesions One of Them; Suggestions as to Treatment; Plastic Surgery on Ovaries and Tubes for their Preservation, J. R. Nilsen, M. D., New York.

Hydramnios, John O. Polak, B. Sc., M. D., New York.

BROOKLYN MED. JOURNAL. (25)

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Functional Derangements of Ocular Muscles, Edward W. Wright, M. D.,

CHICAGO CLINIC. (10)

Laryngeal Tuberculosis, J. Homer Coulter, A. M., M. D., Chicago.

Unscientific Commercialism Contrary to Ethics and Good Manners, Isaac N. Albright, M. D., Chicago.

Hemorrhoids Complicated with Pruritus Ani: Fistula in Ano in a Tuberculous Patient, Rawson Pennington, M. D., Chicago.

Hypodermic Use of Arsenic, Harold N. Moyer, M. D., Chicago.

J. OF MED. AND SCI., PORTLAND, ME. (10)

Cystitis in Women: The Importance of Local Treatment, John Sheber, A. M., M. D., Phila.

Puerperal Eclampsia and Its Treatment, F. J. Taylor, M. D., Pittsfield, Maine.

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Immunity and the Use of Normal Non-Immunized Serums, Joseph McFarland, M. D., Phila.

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Medical Ophthalmoscopy, William E. Gamble, B. S., M. D., Chicago.

The Evolution of Mind, Albert Schneider, M. D., Ph. D.

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The Prevention and Treatment of Cancer of the Uterus (Abstract by the Author), A. Lapthorn Smith, B. A., M. D., M. R. C. S. (Eng.), Montreal.

The Christian Scientists: What Shall We Do with Them? F. Julian Carroll, M. D., Summerville, S. C.

MEDICAL SENTINEL, PORTLAND, OR. (25)

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Hysterectomy or Myomectomy? Kenneth A. J. Mackenzie, M. D., Portland.

Some Thoughts on Medical Advertising, E. Stuver, M. Sc., M. D., Ph. D., Fort Collins.

N. W. LANCET, ST. P. (10)

The Physiological and Medical Treatment of Insomnia, John V. Shoemaker, M. D., LL. D., Phila.

Retroversion of the Uterus, Franklin H. Martin, M. D., Chicago.

A Few Hints on the Treatment of Urethritis, George R. Patton, A. M., M. D., Lake City, Minn.

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Observations on the Use of the Midwifery Forceps and on Some Modifications in Its Mechanism, Thomas Moore Madden, M. D., F. R. C. S., Dublin, Ireland.

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An Abnormal Sexual Condition, Herbert C. Jones, M. D., Decatur, Ill.

VA. MED. SEM. M., RICHMOND. (AUG. 11.) (10)

Pharmacy the Handmaid of Medicine, W. J. Jackson, Ph. G., M. D., San Francisco.

Philosophy of Sickness, Thos. F. Harrington, M. D., Lowell, Mass.

Adenoid Vegetations, with especial reference to their Influence Upon the Ear, A. W. Calhoun, M. D., LL. D., Atlanta.

Cutaneous Electrolysis, Fred. J. Leviseur, M. D., New York.

ST. P. MED. JOUR. (25)

Complications and Sequels of Appendicitis, with Report of a Case, James E. Moore, M. D., Minneapolis.

Tuberculosis of the Breast, Homer Gage, M. D., Worcester, Mass.

Gummata of the Pelvis, with a Report of a Case, Arthur K. Stone, M. D., Boston.

On the Use of Gelato-Glycerine Bougies in the Treatment of Earache, George L. Richards, M. D., Fall River, Mass.

Puerperal Infection, E. W. Moore, M. D., Tyndall, S. D.

A Report of Two Cases in Which a Stone in the Ureter was Successfully Removed by Operation, W. J. Mayo, M. D., Rochester, Minn.

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Effect of Selection in Life Insurance, Emory McClintock, F. I. A., LL. D., New York.

The Ordinary Clinical Examination of the Urine, Thos. C. Craig, M. D., U. S. Army (retired), Brooklyn.

Malarial Toxaemia, Complications and Treatment, with some Remarks on Quinine Intoxication, G. A. McBride, Fort Gibson, I. T.

ST. L. M. AND S. J. (10)

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A Successful Treatment of Dermatic Eruptions, William H. Vail, M. D., S. Louis.

Comparative Therapeutic Value of Recent Antiseptics in Pediatric Practice, Gustavus M. Blech, A. B., M. D., Chicago.

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Catarrhal Deafness—a more Favorable Prognosis, Sargent F. Snow, M. D., Syracuse, N. Y.

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Compound Comminuted Fracture of the Osseous Wall of the External Auditory Canal, James J. Carroll, A. M., M. D., Balt.

N. Y. MEDICAL JOURNAL, AUG. 19. (10)

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How Far Is Retroversion of the Uterus Responsible for some of the Functional Neuroses? Miriam Gardner, M. D., Clifton Springs, N. Y.

Report of Four Cases of Epidemic Cerebro-Spinal Meningitis, with a special reference to the Value of Lumbar Puncture as a Means of Diagnosis, Jose L. Hirsh, A. B., M. D., Baltimore.

Abdominal Injuries due to Blunt Force, Report of Two Cases, Russell S. Fowler, M. D., New York.

JOUR. COMP. MED. AND VET. ARC., PHILA. (30)

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A few Notes on Foreign Bodies Swallowed by Cattle, Arthur S. Wheeler, V. M. D., Biltmore, S. C.

Tuberculosis in Dairy Cattle, and How Shall We Get Rid of It, N. E. Reinhart, V. S., Pottstown, Pa.

Gastritis, F. Glassbrenner, V. S., North Alton, Ill.

Electricity and Its Use in Veterinary Practice, W. W. Thorburn, V. S., Lansing, Mich.

Tetanus, L. D. Ryan, V. S., Emporia, Kan.

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A Preliminary Communication on the Separation of Bacteria from Milk by Natural Process, Rowland Godfrey Freeman, M. D., New York.

A Case of Cengenital Diaphragmatic Hernia, Samuel W. Kelley, M. D., Cleveland.

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Liquid Air: Its Application in Medicine and Surgery, A. Campbell White, M. D., New York.

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Haemostasis in Intrapelvic Surgery, A. C. Heffenger, M. D., United States Navy.

The Exercise Treatment in Tabes Dorsalis, Alfred Wiener, M. D., New York.

Hydrophobia a Disease Easily Cured, Beverley Oliver Kinnear, M. D., New York.

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Some Remarks upon the Causes of Blindness of Thirty-Three Pupils at the Miss. State School for the Blind, W. S. Sims, Jackson, Miss.

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How do Curative Agents Act? H. A. Minor, M. D., Macon, Miss.

Examination of Urine for Life Insurance, W. A. Evans, M. D., Chicago.

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Dilate the Perineum to Prevent Laceration, E. K. Macomber, B. S., M. D., Delta, Col.

Suggestion in Gynecology and Obstetrics, J. F. Ritter, M. D., Maquoketa, Iowa.

Some of the Digestive Troubles of Infants, W. H. Baldwin, M. D., Bethel, Mich.

A Few Hints on the Management of Normal Labor, Wm. J. Edmundson, M. D., San Francisco.

On the Change of Life in Women, A. H. P. Leuf, M. D., Phila.

Treatment of Chronic Malaria, J. B. Maxwell, B. S., M. D., Mt. Carmel, Ill.

Notes on Consanguinity, C. C. Mapes, Louisville.

MED. RECORD, N. Y. (AUG. 12.)

An abdomino-Sacral Method for the Removal of Rectal Carcinoma, H. Otto Summer, M. D., Washington.

Acute Bronchitis—a Symptom; the Treatment from an Etiological Standpoint, Thomas F. Reilly, M. S., M. D., New York.

A Case of Asexualism, Harlow Brooke, M. D.

Epiphora, or the Watery Eye: Its Complications, Etiology and Management, J. H. Woodward, B. S., M. D., New York.

The Operation of Coeliotomy, Robert Bancker Talbot, M. D.

Typhoid Mortality in Twenty-four American Cities, 1889-1898, F. S. Crum, Ph. D., Newark.

BUL. OF. AM. ACAD. OF MED., EASTON, PA. (25)

The Duty of the Doctor as a Teacher, Edward Jackson, A. M., M. D., Denver.

The Ethics of Specialism, A. L. Benedict, A. M., M. D., Buffalo.

The Evolution of Specialism, Ruth Webster Lathrop, A. B., M. D., Phila.

How Far Has Specialism Benefitted the Ordinary Practice of Medicine, L. Duncan Bulkley, A. M., M. D., New York.

Some Obstructions to the Progress of Specialism in Medicine, G. Hudson Makuen, A. M., M. D., Phila.

On the Effects of Specialism on the Medical Profession, J. Cheston Morris, A. M., M. D., Phila.

The Passing of Materialism, Geo. M. Gould, A. M., M. D., Phila.

The Ethics of Medical Advertising, R. H. Babcock, A. M., M. D., Chicago.

What Benefits do the Laity Derive from the Honorable and Efficient Physician's Abstinence from Ordinary Advertising, and How Can They be Helped to Appreciate Them Better, Albert Goldspohn, B. S., M. D., Chicago.

Advertising in the Medical Profession, Charles T. McClintock, M. D., Ph. D., Detroit.

Some Effects of Present Methods of Advertising upon Medical Literature, John A. Lichty, M. Ph., M. D., Pittsburg.

The Ethics of Advertising Applied to the Medical Profession, A. Ravogli, M. D., Cincinnati.

What Shall Be the Future Policy of the Medical Profession with Regard to Medical Advertising, E. Stuver, M. S., M. D., Ph. D., Fort Collins, Col.

Care of Northern Troops in the West Indian Islands, George G. Groff, M. D., LL. D., Puerto Rico.

Some Remarks on Hospital Organization, with Special Reference to Continuous Service, Dr. J. C. Wilson, Phila.

MED. RECORD, N. Y. (AUG. 5.)

The Question of Gruels in the Feeding of Infants, Henry Dwight Chapin, M. D., New York.

Angioneurotic Oedema and Allied Conditions; report of seven cases, B. Onuf (Onufrowicz), M. D., New York.

Reflex Cough, George L. Richards, M. D., Fall River, Mass.

A Case of Traumatic Neurosis with Hemorrhages from the Pharynx, Edward von Adelung, M. D., Oakland, Cal.

K. C. MED. LANCET-INDEX. (10)

Some of the Uses of Plaster Paris in Surgery, N. A. Drake, M. D., Kansas City.

The Etiology of Tuberculosis, from the Standpoint of Biology, Joseph Clements, M. D., Kansas City.

Scarlatina, Tinsley Brown, M. D., Hamilton, Mo.

Diarrhoea of Children, C. N. Petty, M. D., Altamont, Kan.

Abnormal Conditions in Labor (report of four cases), J. A. Sigler, M. D., Mammoth Springs, Ark.

Motor Derangement—Paralysis (tenth lecture), John Punton, M. D., Kansas City.

Juvenile Criminals—A Needed Reform (editorial).

Change and Travel, from a Medical Standpoint (editorial).

N. Y. MEDICAL JOURNAL. (AUG. 12)

Why Some Severe Cases of Appendicitis End in Recovery Without Operation, J. H. Carstens, M. D., Detroit.

The High Aims of the Physician, Beverly Robinson, M. D.

Effects of Influenza Upon the Eyes, Henry S. Oppenheimer, M. D.

Hæmoglobinuric Fever, Edward E. Field, M. D., Norfolk, Va.

The Pathology and Ætiology of Rheumatism, with some remarks on Treatment, Cuvier R. Marshall, A. M., M. D., Detroit.

The Treatment of Forty-three Cases of Typhoid Fever with no Deaths, and Complications in but One Case, Edward C. Seufert, M. D., Chicago.

Some Remarks on the Use of the Suprarenal Capsule in the Nose and Throat, J. Clarence Sharp, M. D., New York.

N. Y. MEDICAL JOURNAL, AUG. 5. (10)

The American Soldier and Venereal Diseases, William A. Hammond, M. D., Brigadier-General and Surgeon-General (Retired), U. S. Army.

Anæsthesia: Nitrous Oxide; Ether; Chloroform. (Concluded from previous number.) S. Ormond Goldan, M. D.

The New Industrial Position of Women in Its Relation to Health and Vigor, Mary Jordan Finley, M. D.

The Typhoid-Fever Epidemics in Southern Camps and Treatment, Joseph F. Chmelicek, M. D., late Acting Assistant Surgeon, U. S. A.

A Nasal Polypus Weighing an Ounce, and Three Inches and a Quarter Long. Springing from the Sæptum Nasi of a Child of Twelve, H. R. Coston, M. D., Fayetteville, Tenn.

A Case of Puerperal Septicæmia, Stephen J. Maher, M. D., New Haven.

MED. SUMMARY, PHILA. (10)

Cholera Infantum, D. H. Keller, M. D., Thurber, Texas.

The Difference Between Cow's Milk and Woman's Milk, Joseph Adolphus, M. D., South Atlanta, Ga.

Clinical Notes on Euquinine, W. R. D. Blackwood, M. D., Phila.

Examining Boards Illegal, J. W. Lockhart, M. D., St. Joseph, Wash.

The Nervous System, Richards Gray, M. D., Ph. D., F. G. S. (Edin.), Sandgate, Kent, England.

Tetanus, Frank R. Brunner, M. D., Eshbach, Pa.

Treatment of Erysipelas, Milton P. Creel, M. D., Central City, Ky.

MED. RECORD, N. Y. (AUG. 19.)

A Type of Tropical Fever, L. L. von Wedekind, M. D., United States Navy.

On the Role of Primary and Secondary Osteoplastic Surgery, in the Treatment of Complicated or Compound Fractures of the Extremities, Thomas H. Manley, M. D., New York.

Angioneurotic Oedema; with a report of four cases, Herman B. Baruch, B. S., M. D., New York.

The Use of Quinine in Malarial Haemoglobinuria, S. L. J. Steggall, M. D., Port Limon, Costa Rica.

Concealed Menstruation, A. Brothers, B. S., M. D., New York.

Cutaneous Electrolysis, Fred J. Leviseur, M. D., New York.

Facial Eruptions Due to Intranasal Disease, Carl Seiler, M. D., Scranton.

Personal Observation on an Unusual Case of Labor, P. T. O'Connor, M. D., Waterbury, Conn.

MED. RECORD, N. Y. (JULY 29.)

A Report of Twelve Cases of Prostatic Hypertrophy Benefitted by the Bottini Operation, with a Few Comments and Suggestions, Ramon Guiteras, M. D., New York.

Nephro-Ureterectomy for Traumatic Haemato-Hydro-Nephro-Ureterosis, John H. Summers, Jr., M. D., Omaha.

A Fracture of the Inferior Maxilla, Henry L. O'Brien, D. D. S., Brooklyn.

A Method of Maintaining Approximation After Colles' Fracture by Short Lateral Splints Without Pressure on the Tendons or Interference with the Circulation, A. E. Rockey, M. D., Portland, Oregon.

Comparative Chest Measurements, H. M. Lee, M. D., United States Army.

A Case of Complete External Dislocation of the Patellae, J. E. Courtney, M. D., Poughkeepsie.

A Case of Tetanus Treated with Antitoxin, A. de Yoanna, M. D., Brooklyn.

CHARLOTTE MED. JOURNAL. (25)

Hemorrhagic Malarial Fever, Wm. Eggleston. M. D., Sewanee, Tenn.

Serum in Tuberculosis, Paul Paquin, M. D., Asheville, N. C.

General Management of Diseases of the Skin, James M. Blaine, M. D., Denver.

Successful Vaccination Without Infection, Thos. B. Horton, M. D., Baltimore.

Common Nasal Causes of Eye Symptoms, W. L. Grant, M. D., Fargo.

Treatment of Chorea, Milton P. Creel, M. D., Central City, Ky.

Some Points on the Surgery of the Thumb, Robert J. Reed, M. D., Wheeling.

Cerebro-Spinal Meningitis, W. S. Ross, M. D., Madisonville, Ky.

Rheumatism, A. A. Young, M. D., Newark, N. Y.

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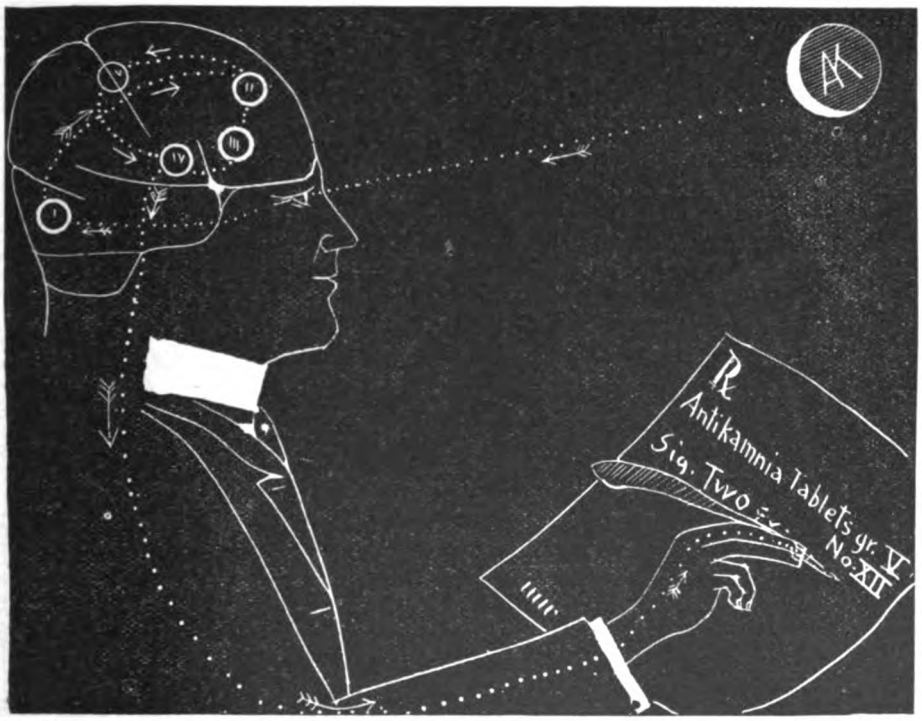

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In hot weather the toper drinks liquor to keep cool and in cold weather drinks it to keep warm, but it is said that solidified alcohol is used in Germany principally for heating. It is sold in tin containers and is fairly firm.

When we were boys our mothers used to tell us to drink nine swallows of water without breathing to stop a case of hiccough, but now some medical luminary tells us to simply depress the tongue and the spasms will cease.

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The Southwest Medical Record of Houston, Texas, says that a country doctor of that state wired Dr. D. F. Stuart of Houston to ship a mad stone at once. The latter answered by asking, "To what stone do you refer? I am not aware that any had gone mad."

A very pretty monument has recently been unveiled at Lille to the memory of Pasteur, and a handsome Pasteur institute has been opened there. The latter is liberally endowed, and the local authorities there have in this way shown their appreciation of the renowned physician and chemist. Pasteur in his early career was Professor of Chemistry and Dean of the Faculty of Science in the city of Lille.

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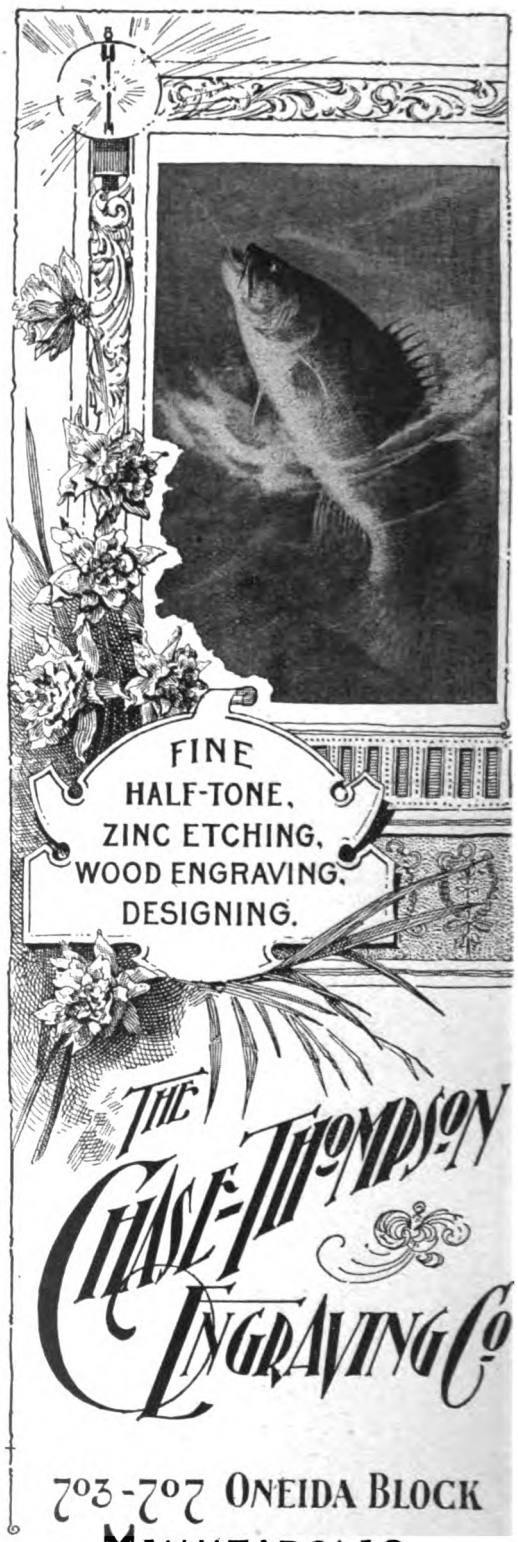

torturing symptoms for which he had been treated so long. The trouble was that no digital or ocular examination had been made by all the medical advisors up to the last one.

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"Materia Medica and Therapeutics," by Finley Ellingwood, A. M., M. D., Chicago. The substance of the article is to the effect, that the influence as a pain reliever of the popular analgesic—Antikamnia—is certainly next to morphine, and no untoward results have obtained from its use, even when given in repeated doses of ten grains (two five-grain tablets). It is especially valuable during the progress of inflammation, and given in pleuritis or peritonitis it certainly abates the inflammatory condition, relieves the pain at once and the diffused soreness shortly, as satisfactorily as opium. It does not derange the stomach or lock up the secretions. It is also of value in pain of a non-inflammatory character, and is a convenient and satisfactory remedy in headaches without regard to cause, if the cerebral circulation be full.

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A hospital for sailors afflicted with tuberculosis has been established on the old Fort Stanton military reservation in New Mexico. This has been done at the instance of Surgeon-General Walter Wyman, Marine Hospital Service.

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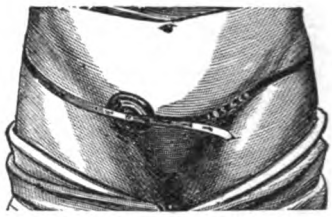

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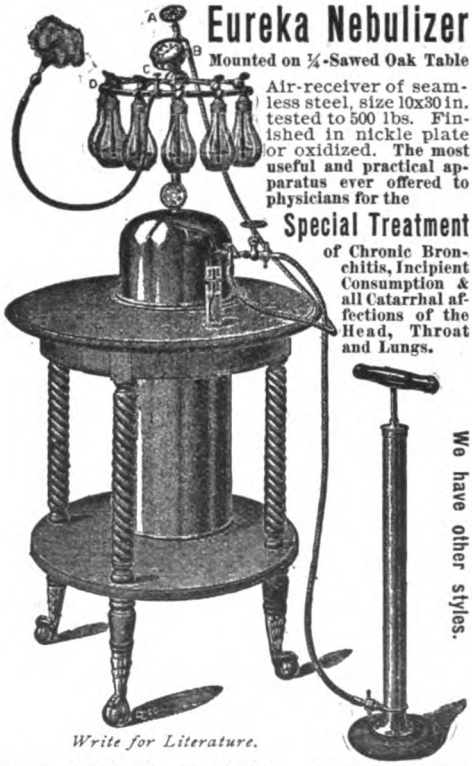

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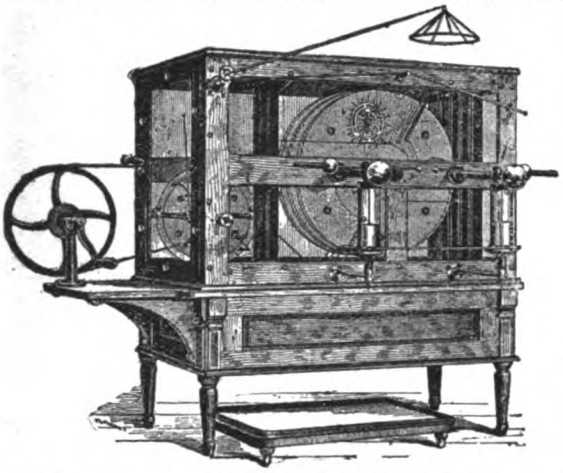

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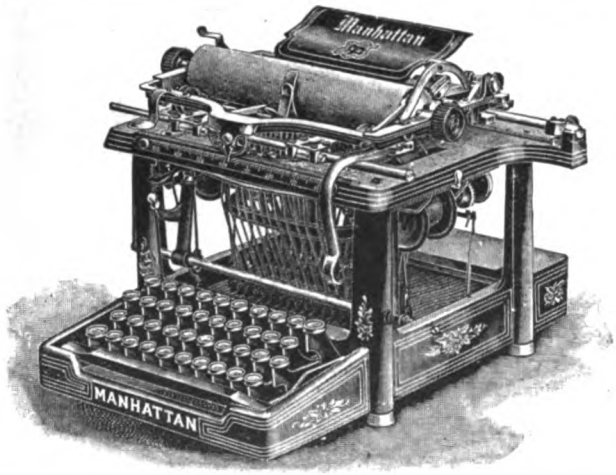

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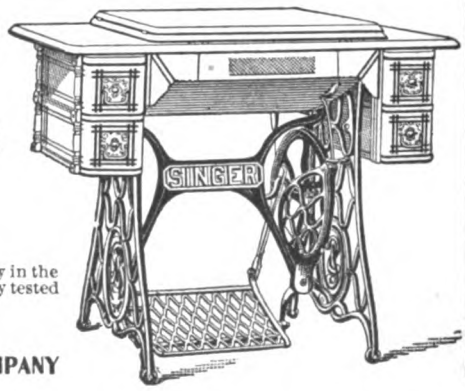

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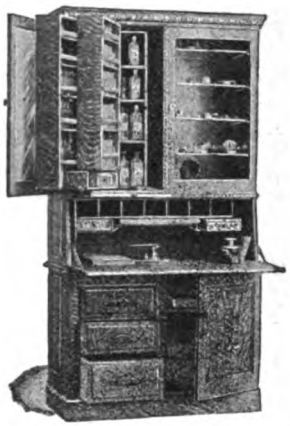

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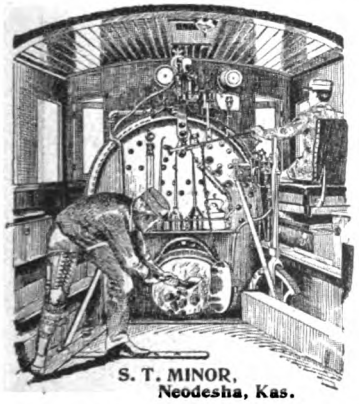

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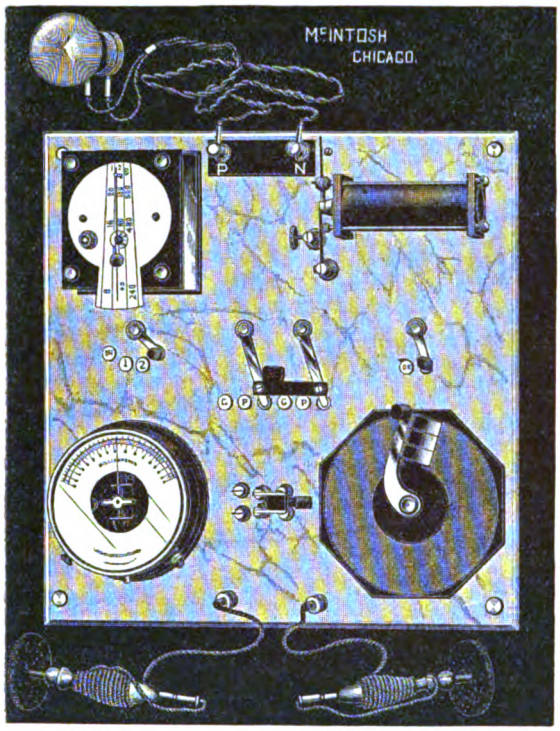

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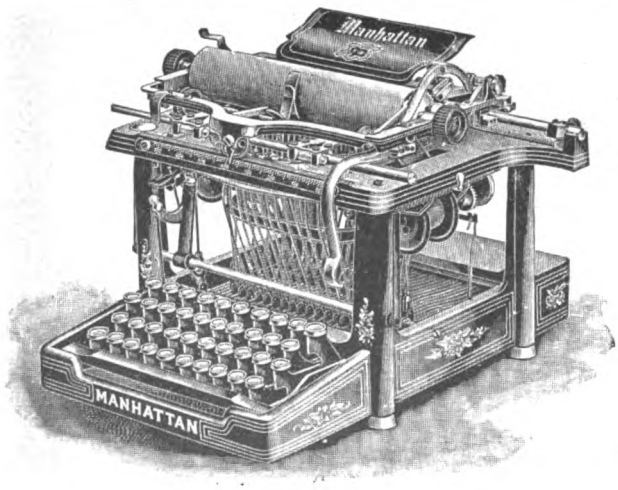

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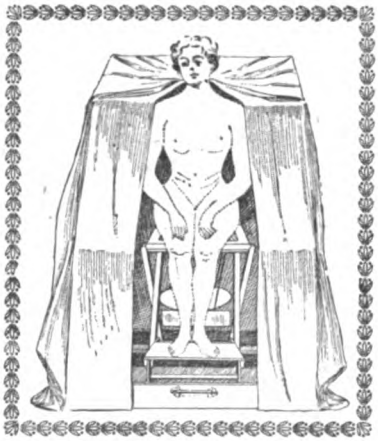

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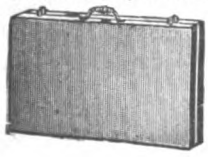

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Original Articles.

*AN ARM SAVED AFTER BEING RUN OVER AND CRUSHED BY A RAILWAY LOCOMOTIVE.

By S. L. KILMER, M. D., South Bend, Ind.

By way of introduction, permit me to say that the following case is not reported in consequence of its being in any sense new or remarkable, or as indicating any unusual skill, but because it shows what can be done by care and patience in cases that may at times seem almost hopeless in the matter of saving useful and serviceable limbs, and thus adding much to the comfort and happiness of the individual and his usefulness to the public, and reflecting credit upon the medical profession. It is of course always much easier and simpler to perform an operation of amputation of a severely injured limb than to save it, and the surgeon is much sooner through with his patient, but the patient is not so fortunate in being through with his affliction when thus maimed for life, for, unfortunately, when a limb is once removed by the surgeon, it remains off forever, and no other comes to take its place, and I contend, much as we esteem the ability of rapid and skillful, as well as successful amputations and operations generally, such ability is not so powerful an argument in favor of the general qualifications of a surgeon, as will be demonstrated by saving, in a useful condition, a limb so seriously crushed as to appear hopeless. I admit that it requires greater knowledge and more self-assurance to decide in favor of attempting to save a mangled limb than is required for its removal by amputation, but it is the surgeon's duty to be possessed of judgment and discretion, indicating when to withhold his hand, as much as it is his duty to perform operations skillfully and dextrously. If the surgeon will put himself in his patient's place, and then consider what he would wish to have done in his own case, simply observe the Golden Rule, he will not make frequent errors in this respect.

I am aware of the fact that some will say a stump is better than a deformed and useless member, and to this I assent, but not all deformed members are useless, nor are all useless members deformed, and the question of serviceableness depends upon their usefulness, and not on their perfection of form, or deformity. The mere fact that at some time a surgeon has succeeded in saving a limb or extremity which afterwards proved useless to its possessor, should not cause him afterwards, when in doubt, always to amputate, for I boldly assert, but without of course the opportunity of demonstration, that for every case of a useless member saved by conservative surgery, a score or more have been amputated, which might, by proper care and attention, have been saved to the great and lasting benefit of the possessors. The ease with which an amputation can be performed, the effect it has upon an unthinking public as an indication of skill on the part of the operator, thus tending to enhance his reputation, the flattering reports in many, if not most, localities, by the daily press, all conduce to operating and amputating without discretion or consideration or discrimination, and thus, in time, there is a hardening of heart, and an involuntary amputating instinct formed by the surgeon to such an extent that all that comes to his mill is amputating grist, and he runs in a single narrow channel or rut, which causes him to overlook entirely the grandest portion of his duties, viz., not only to preserve life but to so preserve the life and functions of an individual

* Read at the 25th annual meeting of the Mississippi Valley Medical Association, Chicago, October 5th, 1899.

as to make him the most useful to himself, his family and the public.

The title of this article may be thoughtlessly considered as a misnomer, the forearm being crushed, but the crushing was practically of the entire forearm, and when we consider the usual rule to always cut wide of the injured tissue in railway injuries, we will see that to follow this rule in amputation of a case of this kind, we would necessarily sacrifice the entire arm. It will be observed that the general tone of this article is a plea in favor of conservatism. Now to the case in question.

About three o'clock in the morning, October 26th, 1897, I was called to attend Mr. George Blue, American, age 27, height 5 feet 6 inches, weight 130 pounds, a yard switchman in the employ of the Lake Shore & Michigan Southern Railway at South Bend, Ind., who, in turning to step from the foot-board of the engine, slipped on the frost and fell in front of the engine, which at that moment started, the engineer and fireman not having observed the fall of Mr. Blue. The engine, in running over him, dragged him for some distance. Perhaps he caught hold of some part of the engine to protect himself, but in any event he was dragged over the ties for some thirty or forty feet. His left forearm lay across the rail, and one or more of the wheels of the engine ran squarely over it, crushing the bones into short lengths and fragments, and mangling and crushing the soft tissues in the usually frightful manner in such cases. There was also a scalp wound of some four inches in length, extending to the skull.

After a primary examination, he was removed to the Epworth Hospital; there, assisted by Dr. C. Stoltz, I made a more careful examination of his arm, and found the above description not in the least exaggerated. My first impulse was of course to amputate the arm above the elbow, as being the proper course to pursue in consequence of the terribly mangled condition of the entire forearm. However, I remembered having read, not long prior, the results of a German surgeon, who had for some time made a specialty of endeavoring to avoid amputations in all cases where it was possible to do so, leaving, practically speaking, amputations to nature, under the opinion that nature was more conservative than art as practiced by the surgeon, and a better judge of the actual requirements than he; his method being simply to assist nature when it was evident that she was performing an amputation; and thus to ascertain whether it were not possible to save many cases which, under the usual practice, had been sacrificed, and his success had been so marvelous as to even astonish himself, saving many limbs that appeared hopeless, and of many others saving a generous portion of the limb to the great benefit of the patient.

Having myself always been given to the practice of conservative surgery, although on a small scale, by means of which I had been enabled to save many entirely useful members, even without loss of motion in the joints which had been opened by the accident, or in the operation, I was the more easily inclined to believe that it would be perhaps justifiable to make the effort in this case to save the arm despite its almost hopeless outlook, inasmuch as the arteries had fortunately escaped severing, as indicated by their continued pulsation, although it was feared the injury might cause them to slough and bring on secondary hemorrhage.

The decision being made, I enlarged by incision one of the openings, from which protruded bones and mangled flesh, sufficiently to enable me to examine with the fingers carefully the entire interior and removed with scissors a large amount of comminuted soft tissue; one section of the radius, two and three-quarters inches in length, which was entirely free from the soft tissues, was also removed, together with a number of fragments of bones of various sizes; a portion of the ulna, two and one-quarter inches in length, being still attached to some of the soft tissues, was permitted to remain, with the hope that it might perhaps receive a sufficient amount of nourishment to protect its vitality.

After having thoroughly irrigated the vast cavity within the forearm, and trimmed off as much as possible everything that was beyond the possibility of reparative process, drainage being provided for, and the fragments of bone replaced in as natural a position as possible, the arm was extended and laid upon a straight posterior board splint, extending from the axilla beyond the finger tips, carefully packed in a gauze dressing, and light bandages applied. Strict asepsis was of course out of the question in this case, but the general principles of anti-

septic treatment were complied with as closely as possible under the circumstances.

The next day there was, as was to be expected, a great deal of tumefaction, the swelling extending well up to the axilla, the skin over the forearm and extending some distance above the elbow much discolored, almost black, while the temperature was 101. On the following day the conditions were worse, and I began to fear that a great error had been made in the attempt to save the arm. However, the condition remained, practically speaking, stationary for several days, and then began a profuse purulent discharge. There were large formations of pus at various places between the elbow and wrist; in fact, there was a generally suppurating condition of the entire forearm, necessitating the free use of the lance, so that the whole forearm resembled a sieve or bag, and upon irrigating with some little force, the fluid would discharge from half a dozen different openings.

After a few weeks a splint was constructed, composed of longitudinal iron bars, curved so as to allow free access to the openings in the forearm, and at the ends of the bars leather straps and buckles, by which the splint was held in position; the bones being again arranged as correctly as possible and free drainage provided for, the limb could thus be handled and dressed without the removal of the splint. The discharge was very free for a period of probably two months, necessitating a change of dressing twice a day. Eventually, however, the swelling subsided greatly, and the discharge diminished, and the general appearance of the arm improved. About this time he left the hospital for his home, coming to my office every day or two for treatment for several months longer. There was still a considerable discharge, and it was evident there was some necrosed bone remaining, and on the 9th of May, 1898, again assisted by Dr. Stoltz, I made an opening on the anterior or palmer surface of the forearm, near the wrist, and the portion of the ulna referred to above, as being left in the hope that it would survive, the entire diameter of the shaft of the ulna, and two and one-quarter inches in length, was easily removed, being found lying in a cavity of its own, entirely freed from all other tissues, and entirely dead.

The periosteum had unfortunately failed to produce new bone, as was hoped, and apparently the contraction of the muscles had crowded out of position the portion of necrosed ulna, approximating the extremities of the fragments of the bones, between which there was a ligamentous union only. The wound was closed and speedily healed. The result is quite satisfactory, as the arm is quite useful, the patient having considerable power of flexion of the thumb and all of the fingers, which enables him to hold a book or other object in his hand very comfortably; the ligamentous union, although quite short, unfortunately still permits the hand to droop, so that the arm becomes decidedly curved. This can, however, be corrected by wearing a splint for a few days, which serves to correct the position of the bones, or did until some months since. There is, however, now a contraction of the muscles, slipping the extremities of the bones over each other, and a shortening of about three inches. The arm is entirely well at this time; that is to say, it is entirely healed and is painless. The ligamentous union and the natural weakness incident to the terrible injury to the soft tissues, makes it of course a very imperfect arm, but it is in a very much better condition, and much more serviceable than would have been any artificial arm that could have been put on the stump, had it been amputated.

An important matter for consideration in this case is the question of the advisability of freshening up the extremities of the bones and wiring them together in the hope of procuring bony union; such result would doubtless add very much to the serviceableness of the arm, but should the effort result in failure, it is believed that it would interfere to a certain extent with its present usefulness.

The result is indeed very gratifying, and demonstrates the justice of the attempt to save the arm, and I cannot refrain from the belief that very many limbs that are ordinarily sacrificed might be saved and made of more serviceability to their possessors by pursuing the course indicated above. It of course takes a long time, and a great deal of service and very much worry also, to produce a result of this character in a case of this description, and perhaps in some cases attempts might be made that would eventually prove to have been ill advised, and in which amputation might become necessary. Still, the results in this case have been so favorable, and my previ-

ous results from the practice of conservative surgery have also been so satisfactory, that I feel not only justified in continuing along the same lines, but would feel that in many cases it would be reprehensible not to make the effort to save very seriously crushed members.

I am of course not to be understood as advocating the attempt to save all limbs that are crushed. There are many of them that it would be the greatest folly to make such an attempt upon, but if the result herein described can be produced in an arm crushed between the wheel of a railway locomotive and a solid T-rail beneath it, it is reasonable to assume that favorable results may be produced in a goodly number of injured limbs that are ordinarily amputated because of a belief that it would be impossible to save them.

I know of no definite rule by which the surgeon's practice in this respect should be guided; much indeed must depend upon the wisdom and judgment of the surgeon; but basing my opinion on the conditions and results in the case reported herein, I should say that whenever the arteries are left intact, providing a blood supply to the parts beyond the injury, it would be justifiable to make an effort to save the limb, however much the bones and soft tissues are crushed; especially so if the condition of the periosteum is such as to warrant the belief in its vitality, and ability to restore new bone. The severed extremities of the muscles can sometimes be held in apposition by sutures. The loose fragments of bone may be removed, the remainder put into the best possible apposition, the limb thoroughly cleansed, laid in as natural a position as possible, kept clean and warm, and some dependence placed in nature, and she will produce results which will frequently astonish the surgeon by the way in which his art is excelled.

I have not mentioned the nerves, for the reason that their fibrous character generally protects them from laceration in doubtful cases, and even if a nerve is severed, it is entirely practicable to unite the severed extremities by sutures with favorable anticipations of satisfactory results.

Lest there should be some doubting Thomas who would consider it impossible that a railway locomotive could thus pass squarely over an arm without crushing it beyond the power of nature with the surgeon's assistance to repair, and who would think, therefore, that an error had been made in the case here reported, pardon me for alluding to another case that occurred in my practice a few years ago, viz. April 21st, 1897, in Mr. E. P., height 6 feet, weight 170 pounds, 28 years old, an employe of the same railway company, who, in blocking a car that had no brake, was caught by the slipping of the stone used for blocking; the wheel caught his fingers, ran over them, and his hand and forearm to the elbow, and yet did not break a single bone. The force was so great and the shock so sudden that it caused him to turn a somersault. There was a violent wrench or sprain of the elbow joint, and also of the shoulder, but, as above stated, not a bone was broken, not even in his hand or fingers, although the soft tissues were badly swollen and discolored for some time.

This is, however, an exceptional case, occurring, no doubt, in an exceptional individual; exceptional, that is to say, from the standpoint of good fortune, as he has at another time since then, quite recently, viz. July 13th, 1899, again miraculously escaped serious or fatal injury, having been caught between the drawbars of two cars, but instead of being cut in two, as is usual in such cases, he was apparently forcibly squeezed and rotated out of the very jaws of death, and although laid up for several weeks from his injuries, he has now entirely recovered and is nearly as well as ever.

While on the subject of conservatism, I hope to be pardoned for referring to one more case, in which the usual rule for amputation or excision was violated, and in which the result demonstrated the justice of the violation, and is a confirmation of the correctness of the opinion and position of Reyher regarding gunshot wounds of the knee joint. In brief, the case was as follows: Isaac James, station agent of the Chicago & Grand Trunk Railway at Granger, Ind., on the 27th day of October, 1895, accidentally dropped from his hip pocket a large caliber revolver, which exploded, and the charge took effect upon his left knee, the ball entering on the inside of the joint, squarely between the femur and tibia, and passed directly through the joint, plowing its way through the articular surfaces of both bones and lodged under the skin at the outside of the knee. The wound was probed and strips of gauze drawn through the course of the ball.

removing thus a number of fragments of bone. After thorough irrigation, the limb was put up in a plaster case, and although the knee joint was badly inflamed for several months, the inflammation eventually subsided and he left the hospital in about three months after the injury with the limb almost well, and with the joint so good that a few months later there was only a very slight limp perceptible in his walk, the motion of the joint being almost perfect.

Other cases might be cited, but the above are sufficient to demonstrate the justice of conservatism, in at least some cases that are generally considered outside of conservative boundaries.

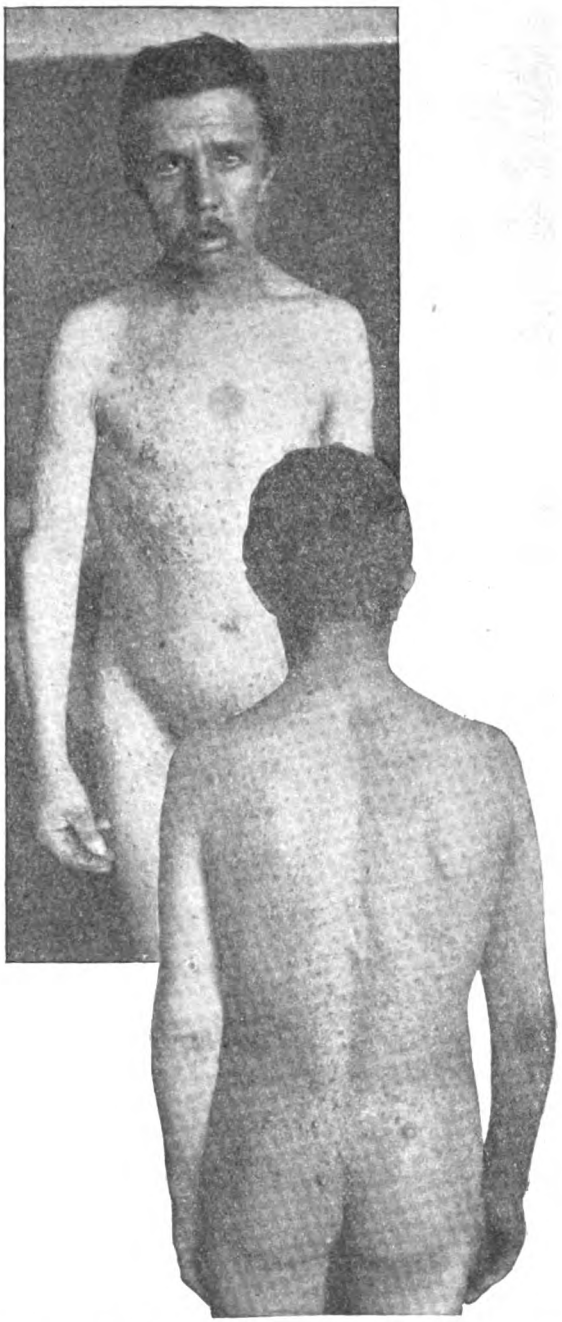
FIBROMA MOLLUSCUM.

By Fred. J. Leviseur, M. D., New York City.

Though this disease belongs to the rare cutaneous affections, its diagnosis is quite easy. It is impossible to mistake the large sessile or pedunculated round tumors, some hard, others giving the impression of an empty pouch (scrotum), for anything else than fibromata. The smaller nodes of hard consistency, imbedded in the skin, are also quite characteristic. There is, however, a third variety of lesions which at first may be somewhat puzzling. They consist of small or larger soft spots of bluish tint. The examining finger sinks easily into the skin when pressing on these spots, and receives the impression as if there was an accumulation of fluid underneath. Such is not the case, but these spots represent deeply-situated young tumors, the contents of which are gelatinous. Quite remarkable is the great number of tumors. Hashimosa, as quoted by Lesser, counted as many as 4,503 in one of his cases. This beats Ochterhony's record, who counted 2,033 small tumors (American Archives of Dermatology, July, 1875). Bergh has very appropriately called the disease, when occurring in such general distribution, "Fibromatosis."

The proofs of direct heredity of the disease are not very convincing. There seems to exist, however, a certain individual or racial congenital predisposition. The skin of the Negro and the Chinese is known to be specially prone to the formation of fibromata. Hebra, the elder, has stated that all his cases concerned individuals "stunted in bodily growth, and of more or less defective mental capacity."

The face of my patient, as shown in the accompanying picture, has certainly an idiotic expression, and in three other cases, which came under my observation, the same condition was easily noticed. I cannot say, however, that the patients were below par as regards their general health. The mental symptoms consisted in slowness of thought, defective memory, general irritability and headaches. There were no delusions or hallucinations, nor a pronounced condition of dementia, as found in connection with myxedema.



I will add here that a long-continued treatment with thyroid extract had no effect upon the patient's mental and bodily condition. A course of arsenical medication was also tried in this patient without results. All that can be done in these cases, therefore, is to remove, by the knife or cautery, those tumors, which, by their size or weight, or by intercurrent inflammatory changes, have become troublesome. I have removed a considerable number of the smaller and more pedunculated excrescences by electrolysis. The tumors were transfixed at the base by the needle connected with the negative pole and the current closed by the patient touching the sponge electrode connected with the positive pole. Two to three milliamperes were sufficient in every case, twenty seconds was the length of time in which the current was allowed to act, and the needle was inserted four or five times.

Electrolysis, or catelectrolysis, as I have called it, acts more in the manner of the injection of fluid into the tissues, and an anæsthesia is soon produced. It is, therefore, advisable to wait about five minutes after the first application and the rest of the operation will be painless. Some of the tumors occasionally disappear by spontaneous involution, but this generally while others appear, and consequently no improvement results.

TUBERCULOSIS AMONG THE QUEEN'S COWS.

A tuberculin test was recently made at Windsor of a herd of forty shorthorn and Jersey cows belonging to the Queen, and most of them were found to react to the test. They were all apparently in good condition but as a result of the test, thirty-two cows appeared to be tuberculous, their temperature rising to 104 degrees F. or more; five cows appeared to be healthy, and three were doubtful. The whole herd was killed and the carcasses were examined at the Royal Veterinary College. Of thirty-four animals whose temperature had risen above 104 degrees F., thirty-three were found to be tuberculous. The remaining animal was not tuberculous, but had a diseased uterus. The rise in this case was sudden, and did not occur until after the twelfth hour. Of four cows which did not react, three were found to be free from tubercle, and the fourth had one small caseous gland in which tubercle bacilli were found. The two remaining cows which were classed as doubtful were both found to be tuberculous. In the formation of the new dairy herd at Windsor, all animals purchased for it will be tested, and admitted only when they do not react.—Am. Microscopical Journal, Washington.

MYASTHENIA GASTRICA.

By John W. Bell, M. D., Minneapolis.
Professor of Physical Diagnosis and Clinical Medicine, University of Minnesota.

Gastro-enterologists are fast becoming convinced that the gastric muscle plays a very important part in gastric pathology; that motility and not secretion is the all important factor. Clinically, motor insufficiency of the stomach manifests itself in one of three forms, depending on the degree of impaired motility present. For all practical purposes it may be divided as follows:

1st. MYASTHENIA WITH STAGNATION:

Slight muscular insufficiency, characterized by diminished elasticity and strength of the muscular coat, as indicated by the inability of the stomach to empty itself within the normal period.

2nd. MYASTHENIA WITH RETENTION:

Pronounced muscular insufficiency, characterized by marked impairment of motility and increase in size, as indicated by inability of the stomach to empty itself, even during the night, hence, constant retention of food with fermentation.

3rd. MYASTHENIA DUE TO OBSTRUCTION:

Secondary motor insufficiency, due to pyloric obstruction, characterized by pronounced and progressive dilatation with constant retention, a surgical, rather than a medical problem, as to treatment.

The aim and object of the internalist should be an early and complete diagnosis. Having determined the existence of pyloric obstruction and its nature, he should then call to his aid the skilled surgeon as he would in a case of appendicitis. The interest of the internalist naturally centres in the first and second forms of impaired motility, as observed in the clinical course of true motor insufficiency.

The clinician, in order to determine changes in size and position, must have a correct anatomic knowledge of the normal stomach. The adult stomach occupies an oblique position within the body, about four-fifths of the organ being to the left, one-fifth to the right, of the median line. Its size, and, in a measure, its position, depends on the age, sex, individual, and degree of distention. The stomach is the dilated pear-shaped portion of the digestive tube situated between the esophagus and duodenum. It has two openings, two ends, two surfaces, two curvatures and two divisions of its cavity. The muscular coat, of especial interest to us at this time, consists of three kinds of fibers,—longitudinal, circular and oblique—of the unstriped variety, arranged in such a manner as to favor the two important movements of the stomach—churning

and evacuating. The cardiac orifice, the most fixed portion of the stomach, is situated behind the cartilage of the left seventh rib, one and one-fourth inches from its junction with the sternum, on a level with the spine of the ninth dorsal vertebra. The pylorus is freely movable, its usual habitat being at a point on a level with the spine of the twelfth dorsal vertebra and tip of the ensiform cartilage, in the right sternal line. It is something of a rover, and, as the result of disease, may be found very low and far to the right or left.

A topographical tracing of the moderately distended stomach gives the following outline: Superior limit, left parasternal line behind fifth rib; mammillary line, fifth interspace; anterior axillary line, which is the farthest extension of the stomach to the left, in the seventh interspace; lower limit, one inch above umbillicus in males, slightly lower in females.

ETIOLOGY:

The predisposition to myasthenia gastrica may be inherited, and is frequent in the neurotic, arthritic and lithaemic. As a rule, however, the myasthenic patient cannot pose as the victim of heredity. It frequently follows in the wake of severe acute diseases, typhoid, diphtheria, and influenza. Physicians should remember that during convalescence from typhoid and kindred conditions, the appetite represents the needs of nutrition, rather than the functional power of the stomach, hence, patients should not be permitted to overload the stomach, lest they develop myasthenia. Myasthenia is one of the most common forms of gastric disorder met with in the initial stage of pulmonary tuberculosis. It also complicates many diseases of the stomach. Its most frequent cause is intemperance in eating and drinking; one of the most frequent being the use of large quantities of water at meal time. There can be no question as to the evil of large quantities of fluid taken with meals. Water is not absorbed by the stomach, hence it must act to distend the organ and hamper the gastric muscle in its labor.

SYMPTOMS.

The symptoms of myasthenia with stagnation, follow the taking of food. Stomach feels full and heavy, eructation of gas, often fluid, headache, constipation, mental and moral depression.

Physical Examination: Inspection and palpation, negative; percussion, with stomach moderately distended, gives slight increase of gastric tympany to the right, left and downward; gastric splashing, as developed by percussion, especially if it linger beyond the normal period of digestion, is a valuable sign. Myasthenia cannot be determined positively by inspection, palpation or percussion, hence the following procedure. (The degree of food stagnation measures exactly the degree of muscular weakness.) Following a very light supper we give the patient for breakfast one soft boiled egg, small piece of beefsteak, slice of bread and a cup of milk. Five hours later, we examine the stomach. If empty on using the tube, marked stagnation does not exist.

DIAGNOSIS:

The limitation of the symptoms to the prolonged digestive period and their relation to the quantity of food and fluid taken at a given meal; the presence of gastric splashing, especially beyond the normal period of digestion; the delayed evacuation of the flabby distensible and slightly enlarged stomach, as determined by test meal and use of tube, render the diagnosis of myasthenia with stagnation positive.

TREATMENT:

1st. Dietetic. 2nd. Medical.

Digestive hygiene should begin with birth, for, verily, the history of the average American stomach is a life-long story of insult and abuse. The diet in myasthenia with stagnation should be selected with great care after a careful examination of the stomach contents. The food should be nutritious, small in bulk and non-irritating, avoiding an excess of starches and sweets, little or no fluid being allowed with meals. I desire to dissent from the view expressed by Hemmeter in his valuable book, that these patients should eat frequently and but little at a time; on the contrary, the stomach should be given time between meals to empty itself and have an interval of rest before introducing more food. The use of at least twelve ounces of hot water one hour before meals should be insisted upon, with the view of flushing the stomach. Having selected a diet, so regulated as to support nutrition and lessen the mechanical labor of the stomach, we place the organ in the most favorable condition to regain its lost muscular power.

In addition, other means are necessary to cure the disease. In the order of their relative value, I would place exercise, general and special, lavage in the form of the intragastric douche, massage, general and special, electricity, hydrotherapy, strychnine, etc. Exercise should be taken in the open air, walking, riding or wheeling, never carrying it to the point of fatigue. Special exercises, tending to develop and strengthen the abdominal muscles, are especially valuable. Lavage in the form of the intragastric douche, used four or five hours after meals, or preferably at bedtime, using hot and cold water, alternating, medicated if indicated, thoroughly disinfects the gastric mucosa and stimulates and tones the muscularis, practically securing, as suggested by Van Valza and Nisbet, in their eminently practical work, all the beneficent tonic effects of an intragastric shower-bath. During the past few months I have secured excellent results in advanced cases of myasthenia with retention, associated with marked dilatation, by using every second or third day the com-

bined stomach tube and douche constructed for me by the Davidson Rubber Company.

Massage, general and special, is an invaluable aid, if judiciously directed by the physician and systematically performed by a competent masseur. On the other hand, massage is capable of doing great harm if left to the caprice of the average masseur. Employed four or five hours after meals it improves the general nervous tone, aids in emptying the stomach, relieves associated intestinal torpor, strengthens the abdominal wall, and improves the abdominal circulation. My experience with electricity leads me to believe that its beneficial influence over motility and secretion has been overrated. It may be used internally or externally, galvanism or faradism, as indicated. Hydrotherapy, in the form of shower or salt water sponge baths, are useful, especially with the neuresthenic class. The alternating hot and cold shower applied over the abdomen and to the spine exerts a beneficial influence in both forms of myasthenia gastrica.

As to drugs, strychnine should be given in generous doses, combined with acids or alkalies, as indicated by examination of stomach contents, aided by the use of gastric antiseptics if required to control fermentation.

I find I shall have only time to briefly call attention to the more advanced forms of impaired motility.

MYASTHENIA WITH RETENTION

Is the natural sequence of the milder or stagnation form. When the myasthenia becomes so marked that the stomach never completely evacuates its contents, not even during the night, we have added the unfortunate symptoms of retention, fermentation and auto-infection. The symptoms common to the milder form become more severe; the appetite fails; flatulency becomes pronounced; nausea, and later vomiting, occurs; the functions of the intestine become disordered by the foul fermenting chyme, finally, in part, delivered to the duodenum; the urine becomes scanty; nutrition fails, as indicated by progressive emaciation. A physical examination reveals a flabby dilated stomach, as indicated by enlarged percussion area, on distending the organ with gas. Gastric splashing in the morning before taking food is a valuable diagnostic sign. The one positive sign is the constant presence of food in the stomach in the morning after a test supper.

TREATMENT:

Aim to improve the motor function, to control fermentation, and to maintain the balance of nutrition, and to increase the power and efficiency of the gastric muscle. The same remedies used in myasthenia with stagnation are indicated, lavage, massage, electricity, hydrotherapy, strychnine and resorcin. The diet should be highly nutritious, small in bulk, nonfermentative in character, consisting of finely divided particles, capable of utilization by the intestines. Sweets and all fats except butter should be excluded. Lavage should be performed daily in severe cases, at late bedtime or in the early morning, using a solution of boracic acid, salicylic acid or hyposulphite of soda. Massage should follow lavage, but never should be used indiscriminately to force the foul fermenting stomach contents into the intestine.

The large majority, even of advanced cases of myasthenia respond well to treatment, faithfully and systematically carried out. The management of the third form of myasthenia, due to pyloric or duodenal obstruction aside from palliative treatment belongs to the surgeon.

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* THE TREATMENT OF CANCER BY THE CATAPHORIC DIFFUSION OF THE OXYCHLORIDES OF MERCURY AND ZINC—THE MASSEY METHOD.

By G. Betton Massey, M. D., Philadelphia.

The electrolytic decomposition of mercury in contact with the gold anode of a galvanic current inserted into a malignant tumor, and the diffusion of the mercuric compounds thus forced through the diseased area by the cataphoric action of the current, is a contribution to practical surgery for which the writer claims the credit of discovery and invention. It is evident that in this process we have a means of sterilizing any focus of germ growth or morbid cell life in any portion of the body that can be safely reached by the current, the principal essential condition to its use being the situation of the growth at a sufficient distance from the vital centers, and the necessity for a drainage path for the escape of a portion at least of the devitalized structure.

The process gives us a scientific method for the destruction, under ether, of the essential disease elements in early local cancerous growths in accessible situations, of all tuberculous deposits in the body except within the skull, thoracic and abdominal cavities, and of such acute local infections as carbuncle, poisoned wounds, etc.

The pathologic fact underlying its use in cancerous growths is that the various affections grouped under the general name of cancer are due to the presence of an abnormal cell life at the site of the disease, partaking of the nature of a foreign invasion of the body struct-

* Read at the meeting of the American Electro-Therapeutic Association, at Washington, September 21st, 1899.

ures, which, in its inception and early stages, is strictly limited in situation to the infected locality. In the present state of our knowledge it is impossible to decide whether these foci of abnormal cell life are made up of living integer, or extraneous, or of parasitic origin, as many now believe, or merely of errant intrinsic cell units that have in some way changed their character and become cells of prey, as it were. Whichever of these hypotheses is true, the fact remains that the interstitial diffusion of a protoplasmic poison in a nascent condition, into, through, and beyond these cells is a most efficient way of destroying the essential elements of cancer life, since in either case this life is the manifestation of local protoplasmic bodies.

In its application to cancer, the process must be of such a thorough nature that not one of the morbid cells or germs may escape infiltration with the germicide. The massive dose required to secure this end results in the formation of two distinct zones of action; that nearest the active electrode being an area in which all vital cells are necrosed, the aseptic slough thus formed being limited by a subsequently developed line of demarcation, and separating in from two to six weeks after the application. Beyond this line of demarcation, which limits the area in which the stroma of the affected organ is devitalized along with the morbid cells, the radiating stream of mercuric oxychlorides will be diffused to a considerable distance, depending in extent on the amount and duration of the current, and will produce a zone of infiltration in which the cancer cells will succumb while the normal tissue cells are only irritated.

It is this zone of infiltration-reaction, particularly, which constitutes the chief value of the cataphoric treatment of cancer, for by it we may reach those outlying colonies of morbid germs that constitute the so-called roots of cancer, and which, in their latent condition, are apt to be missed by other methods of destruction or removal, where only what is seen can be removed. The failure to destroy these colonies is the reason for the recurrence of the growth after the use of the knife or caustics.

It is best to make an effort to destroy all the germs at once when we are dealing with the more malignant varieties of carcinoma and sarcoma, since a mere wound of these colonies results in the attraction of added blood supply and more luxurious growth. To do this in a single application requires a current of from 200 to 1200 milliamperes, and necessitates placing the patient under a general anesthetic. The duration of such an application has varied in my cases from fifteen minutes to an hour and a half, the latter only in extensive growths situated near vital organs, as about the head and neck, where the effect of large currents on the respiration and circulation restricted the strength to 300 or 400 milliamperes only.

The current supply is derived from two to three sulpho-chromic acid batteries connected in series, making a total of sixty or eighty cells, with a voltage of 120 to 160 volts, held in control by an efficient controller. This latter instrument I have been compelled to have made to order by the McIntosh Company, and where the large currents are used I have also employed a specially constructed Weston meter reading to the desired amounts.

The portable acid batteries now generally in use are so flimsy and possess such small cells as to necessitate the construction of batteries with larger elements and cells for this work, which have been made for me by Williams, Brown & Earle, of Philadelphia, under the name of the Massey Transportable Battery, in which the cells are of glass, and more convenient arrangements for raising and lowering the elements by a worm screw and bevel gear has been added.

The active electrode is a cannula made of 18 karat gold, lined with platinum for greater durability, when the pure mercuric catachoresis is to be employed. The portion of the electrode to be inserted into the growth is freely amalgamated with mercury, and after its insertion an excess of the metallic mercury is injected through the tubular center of the instrument by means of a glass syringe attached to it by a piece of rubber tubing. This excess of mercury is intended to surround the active end of the electrode within the growth to ensure a full supply of this metal during the action of a powerful current, as otherwise the gold point will become bare of the material in a few moments. The shank of the instrument is insulated with shellac or fused hard rubber when the application is made within a natural cavity.

In cases in which much tissue is to be destroyed, or where it is difficult to inject the mercury, I have used solid pointed electrodes of zinc freely amalgamated with mercury, which results in the formation and radiation of the mixed oxychlorides of mercury and zinc and the enlargement of the area of necrosis with the same current and duration.

The indifferent, negative, electrode is made of a large plate of lead to which a suitable binding-post is attached, and over which is laid a thick pad made of eight or nine layers of thick cotton absorbent material well soaked in water. This plate and pad are fully as large as the entire back of the patient's trunk, and on it the patient reclines during the application, the operating couch being preferably a spring cot covered with rubber cloth rather than a table, in order that this pad may remain in uniform contact with the skin during the movements naturally made by a person under the influence of ether.

The patient is placed on this couch and pad after all the apparatus has been arranged and tested. When thoroughly under ether the active electrode is inserted into the center of the growth, the mercury injected, and the current turned on in a gradual manner, avoiding shock or sudden increase. The production of the area of necrosis may be seen to begin at once with an effective current, a drab-colored softening spreading in all directions from the instrument. At the end of a varying number of minutes the whole tumor becomes softened as this area increases, the brawny hardness of the malignant tissue changing to a doughy softness, as though a cellular erectility had disappeared coincident with the loss of vitality in the malignant cells. The process should be kept up until the area of necrosis is co-terminous with the apparent limits of the growth, the zone of infiltration being depended on to kill the outlying cells only.

The eschar thus formed is painless and odorless, and separates in due time, the cavity left being allowed to fill with healthy granulations.

Aside from the limitations to the use of this method mentioned at the beginning of this paper it should be stated that its effectiveness in accomplishing a permanent cure is in a direct relation to the earliness of the stage of the disease. A cure cannot be promised in an inoperable case, though its value as a palliative in this stage is very great, and some inoperable cases, as well as others very difficult to reach with the knife, have been cured. Primary growths and early local recurrences are best adapted to secure the best ultimate results, though several of my cases have been followed into the first gland of the axillary chain in breast cases, when this gland alone was affected. In these cases the gland was destroyed separately at the same operation, and the result in two instances has been the destruction of the infection in this situation also.

A notable value of the method in certain cases is the possibility of destroying the cancerous growth in an organ without destruction or removal of the unaffected portion of the organ. It is also a convenient form of operation for cavities, such as the mouth, rectum, etc., as the instruments may be insulated to the point of attack. Finally, as the method is absolutely bloodless after the first prick in inserting the electrode, by reason of the positive pole being used, it commends itself in the eradication of highly vascular sarcomas.

In a paper read at the recent meeting of the American Medical Association in Columbus, Ohio, a number of successful cases were reported in detail, and the following summary of the total number of cases given. The summary includes the initial experimental work, of course, some of the inoperative cases having been mere forlorn hopes:

Operable Cases—Cured 8; probably cured, 1; failed to cure, 1.—Total, 10.

Inoperable Cases—Cured, 2; probably cured, 1; failed to cure, 13.—Total, 16.

Recapitulation—Cured or probably cured, 12 cases; failed to cure, 14 cases.

TETANUS AND TETANUS SERUM.
REPORT OF A CASE.

By Edward Newton Flint, A. B., M. D.,
Minneapolis.

Tetanus is one of that peculiar class of diseases that, occurring most often in the sporadic form, still develops at rare intervals many of the features of an epidemic. Whether it is to be counted as a thing beyond reasonable explanation that this is so, or whether an exact demonstration of the causes leading to such epidemics may be hoped for that shall enable us to conquer them by prophylactic measures, time only can tell.

It is not improbable that in certain seasons and under favorable conditions of atmosphere and soil the bacillus of tetanus attains unusual and widespread virulence, placing it in position to attach itself effectively to any wound with which it comes in contact.

Atmospheric conditions are beyond control, even granting that a close examination of conditions should reveal to us the subtle influences of the air that are favorable to the growth of this particular bacillus.

If, however, we are unable to quarantine ourselves against the baneful powers of meteorological vicissitudes, it seems that in the development of serotherapy we have had at least placed in our hands an agent that will combat the effects of the tetanus bacillus on the human organism when once it has found lodgement there.

None of us are likely to forget the remarkable and sudden development of an unusual number of cases of tetanus in this part of Minnesota, and more particularly within the confines of Minneapolis and St. Paul during the past summer.

The epidemic—if such it may be called—seemed to develop first in a number of persons injured on the 4th of July in the variety of ways usual to that day.

As near as I have been able to ascertain, eleven cases in all developed between July 4th and August 5th.

Of these eleven cases, nine were taken to the various hospitals. Of this number, those who were treated with Parke, Davis & Co.'s Tetanus Serum, and subsequently died, were all brought to the hospital in the last stage of the disease. The three of which I am personally cognizant were all rigid in opisthotonos before receiving the first injection.

One other case I know of also died outside the hospitals, but she received no serum until she also was rigid and the jaws had to be pried open with a spoon for the administration of nourishment.

This would seem to demonstrate the necessity of early diagnosis and administration of serum if life is to be saved. And that life may be saved I am firmly convinced from my experience in one case, though I am well aware of the small weight one case has in determining the status of any remedy in the minds of the profession at large. But even considering that small weight, I would fall short of my whole duty did I not throw it into the scales of experience and add it to our common store.

First and foremost, the Tetanus Serum of Parke, Davis & Co. is perfectly harmless as regards local effects and after symptoms in doses of ten cubic centimeters, administered in a surgically aseptic manner. This from my own experience, and I am assured that it is true of larger and continuous doses.

I am reliably informed, however, that in giving continuous and large doses, covering several days in time, a number of sores and abscesses appear on different parts of the body independent of the points of injection. However, even if this be so and the patient live, the sores must heal up in time, and that is a distinct gain over death by tetanus, one of the most dreadful and agonizing paths to dissolution.

My case was as follows:

Miss Cora H., aged 21, white, single, light complexion, brown hair, blue eyes, lymphatic temperament, rather pale and anæmic and frail though not in the least emaciated. Previous health record good, save for the exanthemata of childhood, from which she made good recovery. Family history good, though singularly enough her maternal grandfather died of "lockjaw."

On Wednesday evening she stepped on a nail projecting through an old threshold which a carpenter had left in the hallway after making repairs. The nail pierced the thin shoe-sole and stocking and entered the flesh of the ball of the left foot just at the root of the third toe. The wound bled slightly and healed perfectly in three days without pain.

The nail was rusted very slightly and the poison may have been in the shoe-sole, or it may have been on the nail.

Monday evening, five days after the wound was received, I first saw the case. The wound was perfectly healed, the mother saying she had applied salt pork to it the first day. There was no redness, no local tenderness, but there was a perceptible swelling in that part of the plantar surface where the wound was located and around it for a space 2x1 inches.

There was a dull aching pain along outer anterior aspect of tibia from ankle to knee.

I advised hot antiseptic lotions and steeps to the foot and made a favorable prognosis.

The entire family were extremely nervous, and because of her father's death the girl's

mother was so worried as to exert a bad influence over the nervous state of the patient. However, then and afterwards I endeavored conscientiously to separate the semi-hysterical symptoms of the patient from those of tetanus, and while they pervaded the entire course of the symptoms, I will make no further reference to them and only present such as I believed were truly tetanic.

The following (Tuesday) morning I was notified not to call again as the patient "was all right."

Tuesday evening they came for me again but I was out.

Wednesday morning I called and found the patient resting more comfortably, but I was told that on the previous evening she had spasmodic cramps in the leg. On examination I found the swelling in the foot markedly increased and the pain extended up the entire leg to the hip, though there were no spasmodic signs and no soreness or stiffness of the jaws.

I opened the foot at the site of the wound freely and swabbed it out with 95 per cent. carbolic acid.

I then went to my down-town office and in about an hour and a half the mother telephoned me that the patient was rapidly growing worse.

I secured three vials of 10 cubic centimeters each of Parke, Davis & Co.'s Tetanus Serum and prepared to use it.

I found the patient at about eleven o'clock was indeed worse. The foot was flexed and inverted. There were occasional slow cramps in the muscles of the thigh with great pain. There was a slight degree of pleurothotonus and the jaws sore and slow in opening, though the patient could still open her mouth and protrude her tongue. I at once gave her an injection of 10 cubic centimeters of the serum into the lower deltoid muscle.

Here I took the temperature for the first time and found it 101°.

Now I do not wish to seem too enthusiastic or to be too insistent about the results in this one case, and yet I must say that the result of the injection was most satisfactory in every way.

At noon the patient broke out into a profuse sweat.

I returned in an hour and the worst features of the symptoms had already subsided.

There was still pain in the leg and some soreness of the muscles of the side, but the stiffness was gone from the jaws, and temperature normal.

In the course of the next forty-eight hours the unfavorable symptoms had all disappeared, save a slight pain along the tibia, which persisted for some days.

I gave no further treatment of any kind except to keep the foot wrapped in antiseptic dressings until it healed again.

As I stated in the beginning, there were no untoward effects whatever locally or otherwise as a result of the injection.

While the position of tetanus serum as a therapeutic agent in tetanus is still *sub judice*, personally I should feel in any future case that I had neglected a good chance to save life if I failed to use the serum.

THE LEGAL RESPONSIBILITY OF THE PHYSICIAN IN CERTAIN CASES.

By F. F. Casseday, Ph. B., M. D., Minneapolis.

To relieve human suffering, the true physician ever stands ready. Oftentimes at the expense of his own health and purse, but, nevertheless, he responds with alacrity to the demands made upon his time, strength and skill. This willingness to respond to the calls of the suffering frequently makes the physician the object of imposition, and many times places his very life and liberty in jeopardy. A man of generous impulses may allow his sympathy to carry him beyond the limits of personal safety in his desire to minister to others, and physicians are peculiarly prone to rashness in this regard, apparently losing sight of the duty which they owe themselves, their families and society. Our civilization is complex, and the relation of the physician to society is of the closest and most confidential nature, thus necessitating a well-balanced judgment, and the exercise of the greatest caution on the part of the physician. Happy indeed is the practitioner whose skill is tempered with judgment and discretion, and in whom kindly sympathy does not beget rashness.

The following cases are in point:

I. Some years ago two colored men, S. and Mc., while in a saloon, got into an altercation, and S., who was a hack-driver, proposed to Mc. that they get into S.'s hack, drive out into the country, and fight it out. This they ac-

cordingly did. During the fight Mc., true to the fighting instincts of the Southern negro, placed his fingers in S.'s right orbit, and attempted to gouge the eye out. He succeeded in destroying the eye. I was called in consultation, to see S., some days after the fight. The patient was in a pitiable condition, his eyeball being completely disorganized (panophthalmitis), and he was unconscious, with muttering delirium; in short, his condition indicated serious involvement of the brain, and speedy dissolution. The family urged the removal of the eye. I refused. My reasons were, first, that the disease had progressed so far that removal of the eye would not check the inflammatory process, or save the man's life; and, second, the man's assailant was under arrest, pending recovery or death. If death occurred after an operation to remove the eye, an attempt might be made to use this fact to hinder the administration of justice. S. died, and Mc. was convicted of manslaughter in the third or fourth degree, with penitentiary sentence.

II. Some fifteen years ago, while enjoying my summer vacation at the seashore, I spent a few days with an old friend, a physician, in Philadelphia. One night a sudden call came to my friend, and upon his invitation, I accompanied him to the house. Upon arrival, we found a woman suffering from peritonitis, superinduced by an abortion. The woman was in an extremely critical condition. She insisted she had done the job herself, unaided. Upon my suggestion, the doctor immediately summoned the coroner. It was a dramatic scene. The woman believing herself in the presence of death, solemnly made her antemortem statement setting forth the facts as stated above, and the statement was duly witnessed. Now, why was it necessary? Simply as a protection to my friend, and to comply with the law. The Pennsylvania law provides, or did at that time, that any physician called to a case where abortion has been performed, shall immediately summon the coroner. Failing to comply with this law, the physician becomes an accessory after the fact, and the penalty is a term in the penitentiary. I am informed that a bright young physician, and an innocent man, served a prison term for violating this law. Ignorance of the law excuses no man. This tale needs no moral.

Railway officials, in their instructions to trainmen, tell them, "In case of doubt, take the safe side." This is a good rule in any line of action.

III. Some twenty years ago, one of my personal friends and patrons, while working on a store building, was struck by a falling iron girder, carried down four stories to the basement, and pinioned under the wreckage. I saw him within an hour after the accident. He had sustained a fracture of the skull, and no less than twelve separate and distinct fractures of the arms and legs, many of them being compound. The city police surgeon had applied tourniquets and rubber bandages to stop hemorrhage. Owing to the pressure from the fracture of the skull, the convulsive action was terrific, the efforts of three men being necessary to keep him on the table. To satisfy the family that everything possible should be done, I summoned Dr. J., a railroad surgeon, and one of God's noblemen, who passed to his reward years ago, in consultation. It was apparent to any competent surgeon that nothing could be done which promised any relief. I will never forget his remark in closing the conference. He said, "The man is beyond human aid. An operation would do no good. He will die. If we operate, and he dies, the unthinking public will say we killed him." We did our duty, and smoothed the patient's path to the grave.

The conditions confronting the physician and surgeon in this country embarrass and frequently prevent him from carrying out measures for relief of the sick and injured, which his calm and unbiased judgment tell him are suited to the emergency, yet, if he applies these measures too frequently, he suffers unjust criticism and worse. This being true, he must adapt himself to the conditions as he finds them, always remembering not only the obligations he is under to give the patient the best skill at his command, but, also, the obligation he owes himself, his family, and society.

A wealthy Russian engineer named Astrokoff, who recently died, left (1,000,000 rubles) $500,000 towards the foundation of a university for women in Moscow. The university is to comprise a mathematical, a scientific and a medical faculty. The municipal council of Moscow has voted an annual grant of (3,000 rubles) $1,500 to the institution.—Argonaut, July 24, 1899.

*MODIFICATIONS OF BOTTINI'S OPERATION FOR HYPERTROPHY OF THE PROSTATE BY GALVANO-CAUTERY.

By Robert Newman, M. D., New York; Ex-President American Electro-Therapeutic Association, Consulting Surgeon Hackensack Hospital, Home in Yonkers, formerly Prosector, L. I. College Hospital, etc., etc.

Bottini's operation for the hypertrophied prostate consists in burning a passage through the enlarged gland by galvano-cautery with his instrument. It is more than twenty years since Dr. Bottini devised and practiced his own operation.

Hypertrophy of the prostate differs from prostatitis in that it is a disease of advanced age, not painful as a rule. The cause is not an inflammation, and the enlargement troubles the patient most as a mechanical obstruction to the bladder, causing disease of the latter organ as cystitis, ureteritis, pyelitis and pyelonephritis.

Bottini has reported at different times his successes, but the profession has only recently looked at that operation favorably. The author of the paper has operated with an original Bottini instrument during the years 1882 and 1883, together with the late Dr. Guleke, but objected to different features of the instrument. This explains the incorrect statement of recent reports, that the Bottini operation has never been performed in this country until 1897. Not having had the expected result with Bottini's instrument, Dr. Newman constructed his galvano-cautery sound for the treatment of the hypertrophide prostate. His paper describing this instrument was published in the Journal of the American Medical Association August 28th, 1886. Then the instrument was improved, and exhibited at the meeting of the International Medical Congress on September 8th, 1887, in Washington, D. C. The paper was published in the Transactions of the International Medical Congress and also in the New England Medical Monthly, December, 1887.

The objections to Bottini's operation were then:

(1) The instrument was clumsy, heavy and unhandy.

(2) The platinum burner was so thick that it got hot too slowly, and, when hot, lost its shape by bending, so that sometimes it would not move back into its beak.

(3) The very large storage battery was too heavy for transportation, and a smaller instrument did not generate enough heat.

(4) The instrument was very difficult to be introduced, and if the obstruction exceeded a certain size, was unintroducible.

(5) The result of this operation was uncertain.

(6) The patient had to remain in bed for weeks.

(7) The operation was not free from different dangers and accidents. Other objections were made by Professor Bydygier in Wiener Klinische Wochenschrift, January 5th, 1899.

For those reasons the Galvano-Cautery Sound was devised and its utility proven by the report of cases. Its use is indicated in all cases of enlarged prostate, where urgent necessity for immediate relief does not exist, and it is desirable to keep the patient perambulant.

Some of the objections of Bottini's old instrument have been removed by modification made by Dr. Freudenberg, in regard to shape, handiness and electro-technical construction, and he added a cooling apparatus.

In lieu of the platinum blade platino-iridium is used. The operation as modified by Freudenberg has lately become a favorite one with the profession. The writer of the paper, however, thinks that more improvements should be made, and suggests the following:

(1) Omitting the water cooler, in order to make the mechanism of the instrument more simple. It has been questioned if it is better to dilate the bladder with water or air; each has advantages and objections, but it is better to prevent the heat than to injure the bladder, which may be accomplished by

(2) The two conductors conveying the heat, each attached to either end of the burner, and each separately run and being insulated. This arrangement would heat the burner, and prevent the heating of other parts of the instrument.

(3) The end of the instrument conical and of a smaller size in order to pass the obstruction and enter the bladder more easily.

(4) A tunnel at the end for a filiform

* Original abstract of a paper read at meeting of American Electro-Therapeutic Association, Washington, D. C., Sept. 19-21, 1899.

guide, over which the instrument passes, to be used at the option of the operator.

(5) The burner of platino-iridium smaller and stationary.

(6) Protector of burner to move, acting as a meter.

(7) An endoscope would be desirable in order to observe the result of the operation.

Messrs. George Tiemann & Co., New York, have made the new instrument with the alterations suggested, except the addition of the endoscope which was exhibited to the association.

*THE DIFFERENTIAL DIAGNOSIS OF SMALL POX, CHICKEN POX AND MEASLES.

By G. R. Curran, M. D., Worthington, Minn.

Diagnosing small pox during an epidemic may be an easy matter. Given a case of varioloid, when there is no history of an exposure, or when there is no knowledge of any other case in the vicinity, it will tax the judgment of the best diagnostician.

Small pox has broken out in our state, and, if we can read the signs of the times, it will not be stamped out until it becomes epidemic. Many physicians have never treated small pox; therefore, it is high time for us to familiarize ourselves with the diseases with which it is often confounded.

Measles is one of the diseases which is often confounded with small pox. In measles, the fever seldom reaches 102° F., but a case of the same severity of small pox will have a temperature of from 104° to 107° F. The eruption is muscular in measles and papular in small pox. The color of the eruption is a brighter red in small pox than in measles. The first signs of the eruption in small pox appear on the forehead on the second or third day; those of measles also appear on the forehead, but on the third or fourth day of the disease. The initial temperature in measles falls to normal at the end of the first day, to quickly rise, and does not fall again until the eruption is fully established. There is no prodromal fever in small pox, but, when the eruption is fully developed, it falls to about normal, to rise again in the pustular stage. There is cough, coryza and photophobia in measles. None of these symptoms are prominent in the first stages of small pox. As a rule, the early stages of small pox are confounded with measles.

There is greater confusion in differentiating between small pox and chicken pox. Mild cases of small pox are frequently mistaken for chicken pox in the latter stages. The vesicles of small pox are situated upon a papular base. This base describes a circle. The vesicle has no elevated base in chicken pox, and the form is more likely to be oval than circular; and in the early stages the spots disappear on pressure, while those in the other disease do not. In the more fatal malady the vesicle is first pointed, then rounded, and, lastly, umbilicated; while in the milder disease it maintains the rounded form only. In small pox the mucous membrane is involved, and the vesicles can be plainly seen in the throat, while in chicken pox this membrane is not involved at all; and in the former there is only one cavity in the vesicle which is hard to rupture, whereas in the latter it is separated into many cavities, and is easily torn open. In variola the vesicle is situated in the true skin and leaves its characteristic scar, but in varicella the vesicle is located between the true skin and the epidermis and seldom leaves a scar. The scab in small pox does not disintegrate, but falls off in mass; in chicken pox the scab gradually disappears in scales. Small pox has but one crop of vesicles, which follow an exact order in evolution; in chicken pox there may be several crops of vesicles, and they follow no exact order of development. It takes about twenty days for all the stages to be completed in variola, but an ordinary case of varicella lasts but eight days; the former causes grave systemic disturbances, and is often fatal, while the latter makes little or no trouble, and is never fatal without complications. Small pox will go through a whole family, taking the oldest as well as the youngest; chicken pox is confined to only the younger members.

Summing up, then, we have the following striking symptoms of the three diseases:

I. Small Pox.—Headache, backache, vomiting and fever.

II. Measles.—Fever, coryza, photophobia and cough.

III. Chicken Pox.—All symptoms slight, and aside from the inconvenience of the vesicles, the indisposition, mild.

* Read before the Southwestern Minnesota Medical Society.

*THE PATHOGENESIS OF FUNCTIONAL NERVOUS DISEASES AND THEIR PROPHYLACTIC INDICATIONS.

Dr. John Punton, M. D., Kansas City, Mo.

Among other things the author said: "All authorities agree that heredity plays the chief role in the pathogeny of nervous diseases, consequently its study becomes of the highest importance. That a certain predisposition, or tendency to nervous disease, is transmitted from parent to child, all agree, and, in its incipient essence constitutes the nervous diathesis or constitution. This manifests itself by nervous irritability and defective inervation of the organic functions, materially influencing the normal development of the nervous system in the offspring, and makes itself felt by a constant tendency to degenerative changes in the nerve elements, rendering the subjects of it peculiarly liable to break down under stress of circumstances that would not affect another person inheriting a different constitution.

"These abnormal conditions of inheritance are largely the result of injudicious and unphysiologic modes of life of the parent, which, in their essence produce lesion of nutrition by contaminating the blood, producing metabolic changes in its constituents that materially influence and lessen its vitalizing power of the nerve centers. What these special changes are—histologic, chemic, electric, toxic, or otherwise—may at present be difficult to satisfactorily explain, but, we all understand their effects on the somatic organism, and enough evidence can be produced to warrant the assumption that they underlie and form the basis of the neurotic diathesis. This then becomes one of the mightiest factors in the pathogenesis of nervous affections, and experience warrants the assertion that it is purely a physical defect, a lesion of nutrition, which can be remedied and even cured, and loses half its horror when this is fully realized and understood. This morbid inheritance that underlies the so-called nervous constitution is not, therefore, a necessarily fatal heir-loom (certain at some time or other to overwhelm its victim, as erronously supposed) but is subject, like all other impoverished blood states, to the laws and principles which govern the science of prophylaxis and therapeusis, and the importance of this fact cannot well afford to be slighted by the family physician in his dealing with children born of neurotic parentage.

"In thus recognizing the blood as the noxious agent in the pathogeny of the various neuroses, it cannot be denied that environment, education, occupation, habits, marriage, physiologic crises, and general careers in life, are powerful adjuvants in favoring and promoting pathologic changes in the blood, which not only exaggerate the pernicious effects of the morbid inheritance, but react upon the nervous system in such a manner as to produce actual disease. But all such agents are usually secondary to the primary cause, for it must be confessed that even in the acquired neuroses, much less the congenital, such factors spend their force first upon the blood and its circulating medium, which again reacts upon the nervous constitution of the individual. That the blood is the chief factor in the production of the various functional neuroses is something more than a theory can be firmly supported by a four-fold proof:

"1st. By analysis of the family history.

"2nd. By actual demonstration in the pathologic laboratory.

"3d. By clinical observation and experience.

"4th. By actual results in their treatment.

"All authorities agree that the vast majority of the functional neuroses are engrafted upon a neurotic constitution, which may be congenital or acquired, and it is known that it can be produced by changes in the blood incident to the causes already referred to. Recent experiment with human blood in the pathologic laboratory go to prove that in certain forms of nervous disease the erythrocytes of the blood disintegrate, while the platelets undergo an abnormal multiplication in pathologic changes that can easily be demonstrated, and, that these morbid products circulating in the blood have a very pernicious influence on the elements favoring the production of neurotic disorders. Those of us who are brought in contact with the various forms of nervous disease cannot fail to be impressed with the large number of neurotics who present undoubted clinical evidence of malnutrition and impoverished blood states, which, in itself, suggests at least the blood as the chief pathogenic factor. Moreover, when the nutrition of such patients undergoes improvement by scientific methods of therapeutics and dieting, the nervous phenomena invariably give evidence of partial if not complete restoration. Even in those cases where the clinical evidence is not so apparent, the use of remedies that nourish the nerve elements and sustain their functional integrity is invariably rewarded by changes for the better. If, therefore, it can be demonstrated by reference to a large number of family histories that the great majority of the neuroses are based upon an inherited or acquired predisposition or neurotic constitution, and that this again is recognized in the laboratory as a lesion of nutrition or change in the constituents of the blood, which receives further support, clinically, by the large number of neurotics suffering from malnutrition,

* Original abstract from a paper read at the meeting of the Mississippi Valley Medical Association, held in Chicago, October 3 to 6, 1899.

and, that when these conditions are remedied, the nervous phenomena improve and often disappear, it would suggest at least the validity of the argument set forth that the blood is largely the responsible pathogenic factor in the production of the various functional neuroses.

"The medical aspect of sociology as embodied in the clinical study of heredity, environment, education, criminology, intemperance, marriage, and the special relation these bear to the pathogenesis of nervous affections, should certainly claim our most earnest attention. In poverty-stricken districts, where the parents are too poor to provide the necessary means to guard against the inevitable result of transmitted taints, or other injurious influences, it is our business to appeal to the state legislature to make the necessary provision for their proper care and protection. That we, as a profession, are not sufficiently engrossed with the all-important problems of prevention, as presented by our present sociologic studies, is clear to all, for, in the light of facts how can we sanction by our woeful indifference the continued abuse of certain influences, which, by their very nature, tend to generate or develop a serious chronic neurotic invalidism that is well nigh incurable? The duty of every physician, who deals with his profession as a noble and humane science, is, rather to point out the methods of preventing occurrence of actual disease in latent constitutional defects or other vulnerable weakness, rather than confine his sole attention to the treatment of their more mature and active manifestations. The responsibility of the medical profession in relation to the coming manhood and womanhood of our race is too lightly regarded, and not until we as a unit arise from our lethargic indifference, and deal positively with the medical sociologic problems that confront us in a more practical manner, can we ever hope to stem the ever increasing tide of neurotic disease, and thus fulfill the true function of our mission as guardians and conservators of public health."

According to the Lancet for June 24th, the remains of Mr. Lawson Tait were cremated at Anfield, Lancashire, and the ashes removed in an urn to be deposited, in accordance with his testamentary wishes, in Gogarth's Cave, an ancient Welsh burial ground at Llandudno, Wales.

According to the Buffalo Medical Journal for July, George H. Kinter and James C. Saunders were recently committed for trial before a United States jury on a charge of manslaughter in the case of Rolfe Saunders, who died while under their care without medical aid being sought.

*"TECHNIC OF ABDOMINAL HYSTERECTOMY."

By J. H. Carstens, M. D., Detroit, Mich.

The usual careful aseptic preparations. The patient in Trendelenburg's position. After freeing adhesions, the uterus and growth is pulled out of the abdominal cavity with the aid of a cork screw. The intestines are kept in place by abdominal towels. Clamps placed on each broad ligament outside of the ovary. The broad ligament is cut one-quarter inch from the clamps down as far as the latter extend.

A cut across the uterus anteriorly from the point of one clamp to the other through the peritoneum and separation of the bladder from the uterus. Another pair of forceps are now placed on the broad ligament, down to the cervix and the balance of the broad ligament cut to the point of the clamps. The slight attachment to the vagina and anteriorly is now easily separated and the growth and uterus removed.

We now have four clamps, two containing each ovarian artery and two containing the uterine arteries. Each artery is now separately ligated with dry sterilized cat-gut. If the arteries of the round ligament are large as they sometimes are, they also require a ligature. The clamps are removed and the stumps and raw surfaces carefully covered with peritoneum by a running suture of dry sterilized cat-gut. If the cervix is removed a small opening is left for a temporary drain. If the cervix is left in no drainage is used except in septic cases when a puncture in the posterior cul-de-sac is made use of for a rubber drain.

His conclusions are as follows:

First. In abdominal hysterectomy, clamp the broad ligaments and remove the growth and uterus.

Second. Ligate the four blood vessels separately.

Third. Carefully cover all raw surfaces with peritoneum.

Fourth. In cases without tears and healthy mucous membrane, leave in the cervix.

Fifth. Any diseased condition of the cervix and malignant growth perform total hysterectomy.

Dr. Mounier relates in France Noire that the natives of the French Soudan take rectal injections daily, the syringe a calabash with a pointed tip. The subject lies on his belly across the lap of a friend, who inserts the tip and blows into a small hole on top. The friend then takes his turn across the other's lap.

* Resume of paper read at the meeting of the American Association of Obstetricians and Gynecologists, at Indianapolis, September 19, 20 and 21, 1899.

*TWO CASES OF DYSTOCIA DUE TO VENTROFIXATION, ONE REQUIRING CÆSARIAN SECTION.

By Xavier C. Werder, M. D., Pittsburg, Penn.

Dr. X. C. Werder, of Pittsburg, reported five cases of firm ventrofixation followed by delivery at term. In two cases dystocia followed this operation done for complete prolapse of the uterus with inversion of the vagina. One case terminated spontaneously, the other required Cæsarian section. The former case had been operated upon by himself, the latter by another surgeon. In both cases a series of operations was done at one sitting, including curettement, amputation of cervix, anterior colporrhaphy, ventrofixation and perineorrhaphy. In his own case very firm fixation of fundus and posterior wall of uterus to abdominal wall was made in order to be sure of relieving prolapse. In the other case infection is said to have been the cause of broad attachment and firm fixation.

He excludes from discussion other procedures intended to hold the uterus in anterior position and defines the limits of ventrofixation as follows:

It is the operation of preference in cases of complete prolapse of the pelvic organs, and in cases in which a very large heavy uterus, due to chronic metritis, is habitually retroverted or retroflexed and causes pronounced symptoms. In these cases he thinks less rigid fixation is ineffective. The fixation should be between the anterior uterine wall; not the fundus or posterior wall; and lower angle of wound.

He attributes the serious after results to errors in technique rather than to the procedure itself.

Guerrant reports the case of primipara at full term who gave birth to a child with congenital absence of both eyes. There was no trace of globe in either orbit. The orbital fissures were about one-fourth inch in length. There was no orbital enormity, and the forehead was not high. In other ways the child was normally developed.

The Medical Age for June 25 says, with reference to a case from the Archiv fur Laryngolgie, ix, 1, 1899, of a woman who had applied for laryngolgic treatment, in whom Berthold noticed that the vocal cords had the appearance found only in the male adult, that the individual was a hermaphrodite, who eight years later returned for a certificate to allow the change of sex, having fallen in love with a woman.

* Original abstract of a paper read at the meeting of the American Association of Obstetricians and Gynecologists held in Indianapolis, Sept. 19, 20 and 21, 1899.

*REPORT OF A CASE OF COMPLETE HERNIA OF THE PREGNANT UTERUS.

By W. V. Anderson, M. D., Toledo, Ohio.

I present this report because the case is unique, so far as I have any knowledge:

On the evening of March 9, 1894, I was called in consultation by Dr. Arne Zetlitz of our city, now of Sioux Falls, S. D. I found him in charge of a large well developed Polish woman, the mother of ten children. She had been in labor for 36 hours under the care of a midwife, before Dr. Zetlitz was called. We found upon examination that the abdominal muscles had been separated to such an extent that the uterus had passed out between the recti carrying the aponeurosis in front of it, and now hung like a great pear suspended by its cervical attachments, the fundus reaching nearly to the knees. The uterus was freely movable and the os was found to be fully dilated. The uterine contractions were good, considering the length of time the woman had been in labor; but the position of the uterus rendered them ineffective; for at each contraction of the uterus the patient would make vigorous effort to help herself, and though the uterus would rise until its long diameter stood at a right angle to the body, yet contraction and shortening of the abdominal muscles instead of assisting delivery, acted somewhat as a draw-string at the mouth of a pouch, so that the greater the voluntary effort, the more it interfered with expulsion.

We placed her under chloroform, and after inverting the uterus and having it steadied by an assistant, while Dr. Zetlitz attended to the anæsthetic, I applied forceps (the head presenting O. L. A.) and delivered without difficulty, a girl weighing 7 or 8 pounds. The birth canal was ample, and there was absolutely no cause of dystocia but the herniated uterus and consequent prohibitory effect of the contractions of the abdominal muscles.

We learn from the Journal of the American Medical Association for July 1 that the faith healer under whose treatment Dora Kraray, a child of Brooklyn, suffered from gangrene of the foot,making amputation necessary, has been sentenced to five years' imprisonment.

Fein, in old suppuration of the antrum, uses powdered nitrate of silver, which he applies with a blower, designed to eject it in a fine cloud and cover the whole surface with a thin layer. A slight burning sensation follows. The discharge diminishes and other symptoms improve.

* Original abstract of a paper read at the meeting of the Mississippi Valley Medical Association held in Chicago, October 3 to 6, 1899.

MONSTROUS OBESITY.

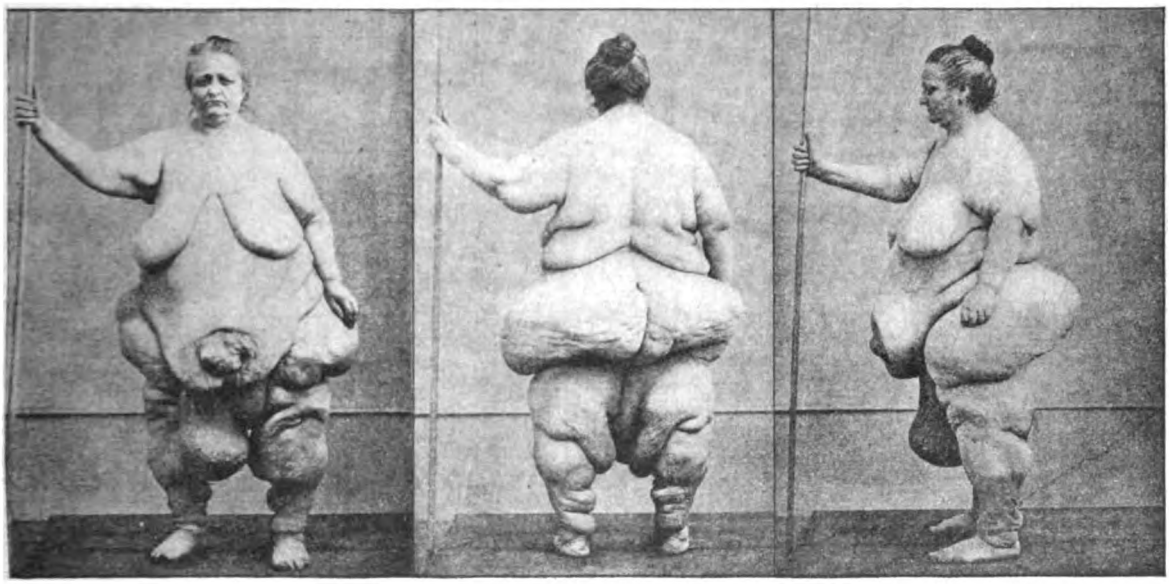
The illustrations shown herewith are those of a strange case on the continent of Europe, shown in the August number of the Medical Review, London, from La Salpêtrière, May and June, page 216.

The woman's age is 47, a wine-seller. Her father died at 61 from strangulation of a large umbilical hernia, and weighed 460 pounds. Her mother was not stout. An only sister died of phthisis at the age of 26, and one brother died at 19, probably from the same cause. Neither of the latter were abnormally stout.

This woman was well formed and agile from the age of 12 to 16. At 15 she took a cold-foot bath during menstruation, when the flow was suspended for eleven months. At 16 menstruation was very irregular, occurring only four or five times a year, and her weight at that time was 198 pounds. She married at 17. At 24 she weighed 242 pounds, and became pregnant for the first time, and the child is now a well-formed girl weighing 165 pounds. At 25 a boy was born, who three years ago was the largest conscript in France, weighing 330 pounds, and measuring fifty-nine inches around the waist and five feet and eight and one-half inches in height. An umbilical hernia appeared during the latter months of the second pregnancy. Five years ago she weighed 495 pounds, but now weighs only 396 pounds. Her general health is good, but walking is difficult.

In commenting on the case the Review says that heredity is evident both in the preceding and the succeeding generation. Probably the dark and confined habitation occupied in her early life, for her parents lived in a dark, ill-ventilated shop, increased the tendency to adipose tissue. It is noted that the hypertrophy has not extended to the face or superior part of the trunk, and apart from the two masses attached to the arms, it is the sub-diaphragmatic part of the body that is especially affected. The lower limbs present the appearance of elephantiasis, but, the writer says, they are not affected with that disease. Dr. Plan proposed to excise the most troublesome masses, but the woman declined to submit to the operations.

It is said that a London medical society has reserved a number of meetings in each year which will be devoted to a recital of unfavorable cases and to a confession of errors in diagnosis and treatment fallen into by members of the society.



Above Cuts Reproduced from the Medical Review (London), Originally in La Nouvelle Iconographie de la Salpêtrière.

FORMALDEHYDE FOR CONSUMPTION.

Inhalation once or twice daily of compressed air made to bubble through a six per cent solution of formaldehyde will, it is said, benefit consumptives in any stage, the British Medical Journal says. Together with this treatment should be given two tablets of phagocytosin after each meal and at bed-time to create red blood corpuscles, and an improvement in the case will be seen in a week as a rule. New red blood corpuscles will be created, the appetite improved, cough and expectoration will be lessened, night sweats subdued, and the patient, if not too far advanced, will be placed in a better position to regain health than by any other known treatment.—Medical Examiner.

Syphilis is said to be the most common disease in Brazil, but malaria is by far the most prevalent in the Strait Settlements.

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OCTOBER, 1899.

SOME THOUGHTS ABOUT VACCINATION.

In England and partly in this country, there is a good deal more opposition to vaccination than in Germany and the northern European states. As vaccination is compulsory in the last named countries, and as people usually do not like compulsory measures, it is somewhat curious that vaccination is quite popular among them, while there is a strong agitation against it in England, and partly in America. Among the detractors of vaccination we find such names as that of Robert Wallace, the celebrated naturalist who became famous by anticipating Darwin's evolution theory, and was the immediate cause of Darwin's publishing his natural philosophy.

Mr. Wallace claims that vaccination is useless and he seems to prove it by statistics, and yet we can hardly believe it. It seems that there must be a vast number of physicians, whose own personal experience proves its protective influence; the bacteriologists and pathologists seem to be unanimous in their belief in it, and its action and effect seem to correspond so well with what we otherwise know about immunity, that there must be some other explanation of the poor results claimed by the anti-vaccinationists, and Mr. Wallace in particular.

In examining a large number of patients, I have been struck with the difference in the appearance of the scars of a majority of English and Americans and of those on Germans and Scandinavians. By baring the arm of a person of foreign parentage, I can, as a rule, see whether he was vaccinated on the continent of Europe or in this country. In the first place, foreigners have several scars, usually three or more; while one scar is the rule here. Then the scars from foreign vaccination are small, consisting of minute dots of scar tissue, while the American scars are much larger and usually show one smooth surface, evidently the result of a considerable loss of substance by ulceration. What I have seen of English scars has reminded me of those produced in this country.

Might there not be something in the method of vaccination pursued in various countries that might explain its popularity in one, as well as the opposition to it in others?

In the first place, it is probable that a higher degree of immunity is conferred by inoculating several pustules than by confining oneself to one. In the second place, the use of fluid lymph secures a more uniform result than that of dried lymph, which, under no circumstances, can be mono-microbic. In the third place the method of inoculation advised in the printed directions in this country must expose the patient to deuteropathic infection—for the scarf skin is either to be scraped off, or numerous small scarifications are advised. It is clear that in this way the numerous microbes that particularly nest in the hair follicles, the sebaceous and sudoriferous ducts get a chance to contaminate the little wound. Therefrom there is a homologous and polymicrobic infection. This leads, therefore, to a considerable ulceration, followed by ugly scars; worse than this would it be if such a polymicrobic infection should have an attenuating effect upon the virus of vaccination. Nobody knows if this is so, but analogies from the bacteriological laboratory indicate that it may be so, and we have no right to put the effect of our operation in jeopardy by a defective method.

The practical deductions I draw from these considerations are: (1) Only sterile lymph in capillaries should be used; (2) at least three pustules should be produced; (3) the inoculation should be made by inserting a minute quantity of the lymph on the point of a fine steel lancet in a little pocket or fold under the skin, almost in the same way as a hypodermic needle is introduced, but less deeply, only under the epidermis, and not to the corium; the

lancet or needle should not be introduced over one-eighth of an inch.

In view of the return of our soldiers from the war, we may be prepared for smallpox epidemics, and the above remarks are chiefly made to bring this important subject under discussion. KNUT HOEGH.

DEMISE OF GEORGE A. HENDRICKS, M. D.

The medical profession has suffered a great loss in the death of Dr. George A. Hendricks, professor of anatomy in the medical department of the University of Minnesota. Dr. Hendricks died at St. Barnabas hospital, this city, at 8:35, Sunday evening, September 24th, from acute Bright's disease. He had been afflicted with this malady for the past five years, but he was able to perform the arduous duties devolving upon him in connection with his position at the University, and at the same time, to attend to his private practice, until the day previous to his death. Saturday morning he complained of the old "heavy" feeling. Sunday morning he became unconscious, and was removed from his home to the hospital, where he gradually sank to a comatose condition, although under the careful and close attention of several of his faithful colleagues who did all they could to restore him to consciousness, until his last moment. Drs. G. G. Eitel, F. R. Wright and Charles Erdman were the attending physicians.

The deceased was known for his great personal magnetism, and was popular at the University and among the profession. He was a leading physician, but his life work may be said to be the building up of an unique system of teaching anatomy, which he introduced in our University. He was recognized as one of the leading, if not the leading teacher of anatomy in the country. For all these reasons his loss is greatly felt among the faculty and lamented in the profession at large.

The following brief sketch of his life, the substance of which appeared in the daily Times, will be found interesting:

Dr. Hendricks was in his fiftieth year, having been born near Gettysburg, Pa., July 17, 1850. He was of Scotch descent on his father's side and Scotch-Irish on his mother's, with an admixture of early Pennsylvania Dutch. His mother belongs to the Donavin family of Delaware, Ohio. He was the youngest of a family of three children. His brother, William Hendricks, the only one living at the present time, is editor of the Hummilstown Gazette of Hummilstown, Pa. Beside this brother Dr. Hendricks leaves a wife, who was on the ocean on her way to Honolulu at the time of the death of her husband, and a mother, who is in Hummilstown.

Dr. Hendricks was for a short time in his early life connected with his father's mercantile business as buyer; he graduated at a normal school and one of the smaller colleges in Pennsylvania; studied for a year with a prominent physician near Philadelphia, and at twenty entered the medical school at Ann Arbor, taking his course in anatomy under the famous Dr. Corydon Ford, becoming his assistant before graduation, and continuing his work as assistant professor of anatomy for fifteen years after graduation, holding at the same time the chair of assistant professor of surgery under Dr. Donald McLane.

In 1889 he was called to the chair of professor of anatomy in the University of Minnesota, which he has held ever since. The department, which is acknowledged throughout the country to be one of the best in the United States, owes its entire existence to Dr. Hendricks. When he entered the department there was little material to work with, and the graded course in anatomy which Dr. Hendricks created, first in Michigan and afterward here in Minnesota, has been copied by all the prominent departments of anatomy in the country.

Eight years ago Dr. Hendricks married Miss Marie D. Patterson, daughter of a wealthy New York railroad man. They spent their summers in traveling, Mrs. Hendricks traveling also in winter, till she had seen most of the civilized world. Three years ago they took up their permanent residence in Minneapolis. And last winter they visited the Hawaiian Islands, where Mrs. Hendricks has built a handsome residence, where they eventually intended spending the severe months of the year and the rest of the time in Minneapolis. Mrs. Hendricks is now on her way to superintend the finishing of the new home.

"REMARKABLE CURE FOR INSANITY."

A dispatch appeared in the secular press a few days ago, dated from Joliet, Illinois, with the above caption. It read as follows:

"Irwin Fuller Bush, of this city, was sent to Kankakee asylum last March pronounced hopelessly insane. Yesterday, through treatment with lymph from glands of goats, Bush is home with his family, completely restored in mind and body.

"The lymph was discovered by Dr. Roberts, an obscure physician of Green City, Mo. Its application for insane cases was demonstrated at a Chicago laboratory where Bush was taken last June. He was subjected to injections of the lymph, showing steady improvement until he was discharged last Tuesday, cured. The treatment is said to also arrest sensibility.

"Roberts has gone to Europe to lay his discovery before Prof. Koch, of Berlin, and other foreign scientists, with a view of having them adopt it in insane asylums there."

CONUNDRUM.

If neither common sense nor abundance of ridicule, a decent regard for general appearance, the approval of all male friends, the great peril of disease, the wanton waste of good clothing—if all these facts and arguments will not prevail to shorten the skirts of women while walking on the filthy streets, what power will persuade them to abandon the office of street sweeping? Give it up.

It would be well for physicians to instruct their patients, who see black and red spots before them, to quit playing poker.

Progress of Medicine.

OBSTETRICS.

UNDER THE CHARGE OF

A. B. CATES, A. M., M. D. R. E. CUTTS, B. S., M. D.

THE OPERATIVE TREATMENT OF LABOR COMPLICATED BY PELVIC DEFORMITIES.

(August Obstetrics.)

Based upon a critical review of the first thousand patients delivered in the obstetrical department of the Johns Hopkins Hospital By George W. Dobbin.

The conclusions arrived at are as follows:

1. In 131 cases of contracted pelves there was necessity for operative delivery 46 times, 35.11 per cent.

2. The pelves most frequently requiring operation are the rachitic and irregular forms. The generally contracted pelvis, though very common in the negro race, is comparatively rarely sufficiently deformed to seriously obstruct labor.

3. Pelves, in which the degree of contraction is slight, and those in which the contraction is very marked, are the easiest for treatment, as in both cases the indications are definite, and should give the operator little trouble in deciding upon the treatment to be pursued.

4. On the other hand the pelves possessing a medium degree of contraction are the most perplexing, and call for the exercise of the greater skill and judgment. When proper appliances are at hand, such cases are best treated by tentative application of forceps, and this failing, immediate Caesarean section.

5. In general, forceps give a lower fetal mortality than version, but version done as a primary operation on a moveable head, in a slightly contracted pelvis, is a safer operation for the child than a difficult high forceps operation.

6. Except in very exceptional cases, symphysiotomy is not to be compared with Caesarean section, for the former operation, besides causing greater injury to the mother, is always an uncertain procedure.

7. Operations on contracted pelves are rarely uncomplicated. Among the commonest accidents may be mentioned premature rupture of the membranes and prolapse of the umbilical cord.

8. The only rational and scientific method of obtaining "corrected morbidity" statistics is by the bacteriological examination of the uterine lochia. for only in this way can we say definitely which infections are the result of operation. R. E. C.

NOTES ON THE INDUCTION OF PREMATURE LABOR.

(By Henry C. Coe, M. D., New York. Read at a meeting of the Harvard Medical Society, May 27, 1899.)

There is such an apparent unanimity of opinion with regard to the technic of this operation that it would seem to admit of no argument. Students are led to infer from lectures and text-books that to excite artificial uterine contractions is easy and simple, while in actual practice they are surprised and disappointed at their inability to accomplish the desired result. Several cases are reported of operations upon and rough handling of the pregnant uterus without causing abortion. Marked dilatation of the cervix for obstinate vomiting rarely causes but slight and transient uterine contractions.

A recent text-book on obstetrics advocates the introduction of a bougie. This is considered more or less uncertain and there is also considerable risk of rupturing the membranes, even in the hands of an expert.

Preference is given to the method of dilating the cervix and exciting uterine contractions by means of the gauze tamponade within the uterus with or without the subsequent introduction of rubber bags. Cases are reported in which uterine action could not be brought about even by this method, and manual dilatation had to be resorted to. Where time permits, packing should always precede manual dilatation, since the packing softens the cervix and makes the further dilatation much more readily and effectively accomplished.

It is rarely necessary to give an anæsthetic in order to introduce the gauze or bags. It would seem unnecessary to add that rigid asepsis is indispensable in all these manipulations. R. E. C.

PEDIATRICS.

UNDER THE CHARGE OF

H. B. SWEETSER, M. D. J. P. BARBER, M. D

LARYNGOSPASM, ECLAMPSIA AND TETANY IN CHILDREN.

Professor Adolph Baginsky, in a classical clinical lecture (International Clinics, April, 1899) showed the connection of these three conditions, or symptoms, with one another, and also with rachitis. Almost without exception laryngospasm develops in rickety children. In rare cases it may depend on some chronic cerebral trouble, as hydrocephalus, or cerebral intoxication from the presence of toxines of acute infectious fevers. On the groundwork of a rachitis develops by preference the unstable nervous equilibrium which is upset by the slightest unusual irritation and leads to

this characteristic nervous explosion in the delicate nerves of the larynx which constitutes laryngospasm.

One of the four children which he presented had a mild attack during the clinic which he describes as follows: "There is a preliminary stage of uneasy crying, almost moaning or whining; then a catch of the breath; then several catchy, cog-wheel respirations in succession, while in the larynx a tone is produced that is high-pitched, crowing in character, whence the name stridulous; then the breathing stops completely for an instant and the child remains absolutely motionless; then follows a deep, loud, long-drawn-out inspiration, and the child recovers as if from fright, to cry for some time, and after a while be completely itself again.

"In severer cases the clinical picture of the affection is much more alarming. The cog-wheel respiration is followed by complete cessation of breathing. The mouth remains open, the alae nosi are drawn in, the facial muscles are in cramp-like contraction, the eyeballs start from their sockets, the look becomes an absolute glassy stare, the face gets red, becoming gradually darker and finally deeply cyanetic. The extremities, especially the upper ones, show spasmodic tremors. Then the pulse stops for a time and the child is unconscious, the cyanosis gives way to intense paleness, and the child sinks back into its mother's arms as if dead, all vital functions in abeyance.

"One such an attack is apt to follow a series of general convulsions, which may last only for a few minutes, after which the child may appear almost perfectly well, as if nothing were the matter. Sometimes, however, every effort to restore the respiration is in vain, and the children die, despite every medical help possible. Laryngospasm is, in fact, the most frequent cause of sudden death in children."

One of the children was in a state of eclampsia following a severe attack, and after demonstrating the condition, he proceeded to show the connection between the two states. The connection between extremely mild attacks of laryngospasm and eclampsia is betrayed by the gradation observed in the attacks themselves. It is not difficult to understand that a very severe local spasm might, by the reflexes awakened, go over into a series of general spasms. He thinks that laryngospasm by producing brain anaemia leads to eclampsia. He mentions Kussmal and Tenner's experiments showing that brain anaemia will in animals cause convulsions. In laryngospasm as a result of the cessation of breathing there is an intense congestion of the lungs. The work thrown on the heart is sometimes so great that for a moment it stops entirely. This produces great congestion of the brain, especially of the large and smaller venous trunks. They now occupy much more space than before, and an increase of intracranial pressure results, which drives the blood from the cortex. The anaemia thus produced causes the explosion of nerve force all along the motor tracts which we call convulsions or eclampsia.

He mentions the fact that rachitis is closely associated with dyspepsia and that in both there are faults of nutrition that permit the entrance into the circulation of higher and lower albumoses than those which the system can readily employ for metatolic purposes. These compounds act as toxines, and, as the infantile constitution is extremely susceptible to toxic influences, owing to the unstable equilibrium of the cellular life of the organism, not as yet fully developed, and ever using up its quantum of force for developmental purposes, its organic functions are easily affected. Solltman has pointed out that, while in the brain development is extremely rapid, yet it is the inhibitory nervous mechanism which is longest incomplete. As a result of this, irritations that in adults, and even in older children, have no effect upon the central nervous system, lead in young children very easily to alarming explosions of nerve force.

The irritants may act directly upon the nerve centres, as when the toxines of an infectious disease or of imperfect digestion are carried by the blood to the brain cells, but, besides this haematogenic irritation, there is a neurogenic irritation that leads to explosions of nerve force and spasmodic seizures. This is especially true for irritation of any of the widely distributed branches of the vagus.

Just where the center is from which these explosions of nerve force come is not so clear. Krause showed experimentally that there seemed to be a center for closure of the glottis in the cortical region of the gyrus praefrontalis. Semon and Harsley found, on the other hand, a center for involuntary closure of the glottis in the region of the calamus scriptorius. In any case, it is much more the undeveloped state of the children, still further emphasized by that disturbance of nutritional and developmental processes which we call rachitis, that is responsible for the attack, than any disturbance of a natural reflex arc.

He showed one of the patients in a condition of tetany and demonstrated the diagnosis as follows: "If I compress with this rubber tube the arm of this little child here, which had the moderately severe attack of laryngospasm, you notice at once a change in the position of the hand. The fingers are pressed together in a slightly flexed position, the flexure occurring mainly at the metacarpophalongeal joints, and the thumb in adduction is pressed upon the fingers which partially cover it,—the accoucheur position of the hand. Then come twitching of the muscles of the arm, in the intervals of which it can be noted that a state of spasm exists. This is Trousseau's phenom-

enon, and is pathognomonic of tetany. When the nerves or arteries leading to an extremity, in the heightened state of muscular reflex activity which exists in this disease, are pressed upon muscular twitchings accompanied by spasms, which sometimes become general, result. If I tap the muscles of the jaw here, you see the slight contortion of the face which results; this is the facialis phenomena, Chvostek's symptom, and is due to the hyperirritability of the facialis nerve, though it is now known that this nervous hyperexcitability exists in all nerves in tetany."

Enlargement of the thymus and the lymphatic constitution, he says, have been put forward in the last two years as playing an etiologic role in laryngospasm. Not that either of them is now advanced for the first time, but they have once more been brought into prominence. There is no doubt that suffocative attacks, accompanied by quickened respiration, cyanosis, venous swelling, dilatation of the pupils, general convulsions, asphyxia, and death may occur from enlargement of the thymus. These attacks are deceptively like laryngospasm, but are due more to mechanical pressure upon the larynx (or trachea) than to reflex nervous action, though this may sometimes play a part too. That these sudden hyperanaemic enlargements of the thymus are among the most prominent causes of sudden death in children, he says he has not the slightest doubt. As to the differential diagnosis between true laryngospasm and these attacks of suffocation due to an enlarged thymus, the pathognomonic symptom is the enlargement of the thymus. This is not so difficult to diagnose as a rule. Sometimes palpation at the upper end of the sternum will help, while an area of dullness on percussion beneath manubrium sterni very seldom fails to indicate the true cause.

As to the lymphatic constitution, here too is an old, well-known condition under a new name. Children affected by it are described as pale and delicate, often anaemic, with enlarged tonsils, including the pharyngeal tonsil,—that is with so-called adenoid vegetations,—with polyadenitis or lymphatic glandular enlargement all over the body, especially in the cervical region, and often with enlarged thymus. In such children, it is said, the lymph follicles all along the intestinal tract and the mesenteric glands are on section found to be enlarged. Subjects of the lymphatic constitution are, he thinks, only selected cases of the most outspoken form of scrofula. They are extremely irresistant to infection: hence the enlarged glands and the enlargements of lymphatic tissue all over. They are irresistant to toxic as well as to bacterial action; hence the disturbance of their blood-making organs and their anaemia. That such patients should be more subject to laryngospasm or to spasmodic attacks of any kind is clear from what has been said of rachitis and dyspeptic conditions as the favorite soil from which laryngospasm and eclampsia develop.

Baginsky recommends phosphorus very highly in the treatment. He gives 1-20 to 1-30 gr. three times a day, and says it often works with marvelous rapidity. After the first or second spoonful the attacks disappear to recur no more. It is an excellent remedy for rachitis, but, he thinks, it acts not so much as a specific for that disease as a soothing, strengthening nervine. When phosphorus fails to inhibit the attacks, or after it has been used for some time and they recur despite its continuance, he has recourse to the bromides and musk. Any cause of local irritation must be diligently sought for and properly treated, especially any disorder in the region supplied by the vagus. When eclampsia develops or laryngospastic attacks follow closely on one another, he has found chloral the most useful remedy. He gives it per rectum in doses of 8 grs. to a child of two years old and fifteen or twenty grs. to one three or four years of age, to be repeated in two hours if necessary. With the zinc preparations, arsenic, or antipyrin he has never had any success either in laryngospasm or in eclampsia.

He demonstrated the soothing effect of a continuous current of electricity on one of the patients with eclampsia.

In very severe cases he applies leeches over the mastoid, one for each year of the child's age, or where there seems to be imminent danger of a fatal termination he opens a vein. He thinks he has seen life saved through the relief afforded to the congested venous circulation by removing two or three ounces of blood.

It is difficult to discriminate in abstracting from a lecture of this kind where every sentence is pregnant with ideas, and the entire lecture is urgently recommended to the reader interested in the subject.

J. P. B.

Operate in: (1) Local or partial epilepsy (Jacksonian) when convulsions are limited to a particular group; (2) in epilepsy, general or partial, when the condition is followed, or was apparently caused by, traumatic depression; (3) in many cases in which partial epilepsy has followed a head injury, even if there are no external indications, but in each signal symptoms indicate the brain area affected.—McCosh.

One per cent. of common baking-soda put into the water in which the instruments are boiled, in order to sterilize them, will, to a great extent, if not totally, prevent rusting.—Massachusetts Medical Journal.

Gluttony is the source of all our infirmities and the fountain of all our diseases.

Neurology and Psychiatry.

UNDER THE CHARGE OF
R. O. BEARD, M. D., W. A. JONES, M. D.

A CASE OF INTRAUTERINE EPIDEMIC CEREBRO-SPINAL MENINGITIS.

By R. B. H. Gradwohl, M. D.

The author (Phil. Med. Jour. Sept. 2, 1899) reports the first case on record of epidemic meningitis in the fœtus.

L. L., age 31, married, of good family and personal history, was brought to the City Hospital, St. Louis, in February, 1899. At the time an epidemic of cerebro-spinal meningitis was in progress in the city. She was seven months pregnant at the time. Two days before had had pain in ear, which did not improve, and when admitted to hospital she was in a comatose condition. On admission, respirations somewhat labored; pulse rapid and weak, 120; temperature 102; pupils unequal; Kernig's sign present; hyperæsthesia and photobia were present, and a petechial eruption existed on chest both anteriorly and posteriorly. No fetal heart sounds could be heard. The patient grew steadily worse, urine the following day showed both albumin and sugar, and death occurred in afternoon.

Necropsy five hours after death. Cranial cavity of mother showed typical meningitis, with great injection of pia, and an abundant purulent exudation scattered here and there over the entire meningeal surfaces, especially marked at the base. The same condition was found upon the cord. An exact counterpart of the condition of the maternal meninges was found in the fœtus, with perhaps more of a sero-purulent exudation than a purely purulent one as found in the mother.

Bacteriological examination of fluid from both the maternal and fetal meninges revealed the presence of the diplococcus intracellularis meningitidis. The same micro-organism was also separated in pure culture from the left ear of the mother, where a small quantity of pus was found.

Cultures taken from the lungs, blood, placenta and uterus were barren of growth. Dogs inoculated from both mother and fœtus died in convulsions on the fifth and seventh days.

The only similar case on record is one reported by Herwerden, in which the mother died of sporadic meningitis, and the child lived five days and died of meningitis complicated with pleurisy. In the meningeal exudation of both mother and child, and also in their blood and liver, pneumococci were found.

W. A. J.

PACHYMENINGITIS SPINALIS EXTERNA—RECOVERY COMPLETE.

By F. W. Langdon, M. D., and Albert H. Freiberg, M. D.

The authors (Jour. of Amer. Med. Ass., Aug. 26, 1899) describe a very interesting case of quadriplegia which improved with exceeding rapidity under extension treatment and finally attained complete recovery. The article is well illustrated with charts showing with great clearness the extent and variation of both motor and sensory disturbances.

J. X., age 19, Hebrew-American, had been troubled for six weeks with loss of power in arms and legs, and within past few days had developed fever and general malaise. Father died of consumption; mother and one sister are subject to rheumatism. Patient has been healthy; syphilis can be positively excluded. Had gonorrhœa eight months ago followed in two weeks by pain and stiffness in the back of neck, which he called "rheumatism." Next five months well. Onset of paralysis was gradual and was accompanied by some pain and rigidity in back of neck. Right arm was first affected. He had at no time pain in his limbs or any bladder or rectal defect. Temperature on admission evidently due to an intercurrent tonsillitis and in no way connected with paralysis.

General nutrition good; neck rigid, its tissues apparently infiltrated and indurated posteriorly, but without much tenderness on pressure or manipulation. Quadriplegia is present, practically complete below elbows and knees; the paralysis is moderately rigid, almost waxy in type; elbow-jerks present and equal; wrist-jerks present, active and equal; knee-jerks exaggerated and equal; rectal and ankle-clonus present and equal. A tuberculin test, with m. xv of a 1-250 solution was followed in two hours by headache, and by chill and sweating in twenty-six hours. At the height of the process there was only very feeble muscular movement in any of the extremities, but electrical reaction was normal, except for partial R. D. in right hypothenar muscles. Disturbances of sensation consisted of marked diminution of temperature, sense over thorax, abdomen, and upper arm anteriorly, and on forearm and hands anteriorly and posteriorly. Analgesia developed later than the other disturbances and was confined to the anterior part of the thorax below the nipple line. As no improvement appeared, Dr. Freiberg was called in consultation, and he describes the condition of the neck as showing a considerable, firm diffuse swelling immediately below the occiput and extending downward to the fourth cervical spine. Without any distinct boss it was sufficient to render indistinct to the touch the vertebral spine. There was considerable tenderness on pressure complained

of in the whole swollen area. There was no torticollis, but rotation, movement of the head backward or to either side were interfered with, while the nodding movement was normal. Extension was applied to the head while the weight of the body served for counter-extension. The weight applied at first was three pounds, which was afterwards increased to twelve. Within twenty-four hours after application of the apparatus, it was difficult to detect any sensory loss over thorax or abdomen, and, when found, it was too irregularly distributed to be charted. Twelve days later the only sensory disturbance was loss of temperature sense on hands. Nine weeks after beginning of extension, dynamometer showed right hand 50°; left 46°. Last May, examination showed the patient to be normal in all respects except that there was still slight induration about the spinal processes, and the movements of rotation and flexion forward were a trifle limited. The authors discuss the nine possibilities of diagnosis and conclude: "The symptoms indicated an increasing pressure of exudate with its incidence at the first and second cervical segments of the cord anteriorly, thus compressing the ascending antero-lateral tract of Gowers (temperature sense) and the pyramidal tracts before their complete passage into the lateral columns. Treatment in addition to the extension consisted of potassium iodide and reconstructives." W. A. J.

DISGUISING THE TASTE OF NAUSEOUS DRUGS.

In his "Pocket Formulary of Diseases of Children" Dr. L. Fryberger has devoted considerable attention to the important question of how to disguise the taste of nauseous drugs. The following are from the list:

Acetonilidum, gr. i., disguised by gr. iii. of white sugar; ammonii bromidum, gr. i., by m. v. syr. aurantii; ammonii carbonas, gr. i., by m. v. syr. aurantii or tolu; belladonnæ tinct., m. ii., by m. ii., syr. aurantii; calomel, gr. i., by gr. iv. saccharum lactis; cascara sagrad., ex. v. fl. m. x., by m. v. syr. zingiberis and ext. liquiritiæ fl.;chloral hydras., gr. i., by m. v. syr. aurantii or pruni virginianæ with dr. i. aq. uiritiæ fl.; chloral hydras., gr. i., by m. v. syr. aurantii; ferri chloridi., tinct. m. i., by m. v. syr. aurantii or glycerinæ; nucis vomicæ tinct., m. i., by m. xx. syr. aurantii; liq. potassii arsenitis, m. i., by dr. i. aq. cinnamonii or m. v. syr. tolu; potassii acetas, gr. iii, by m. xv. syr. rubi idæi; potassii bromidum, gr. iii., by m. xv. syr. aurantii; potassii iodidum, gr. i., by dr. ss. aq. menth. pip.; sodii salicylas, gr. iii., by m. v. syr. simplicis and gr. i. aq. cinnamonii.—Medical Record.

Abuse your stomach and have headaches.

Book Notices.

AMERICAN POCKET MEDICAL DICTIONARY. Edited by W. A. Newman Dorland, A. M., M. D., Assistant Obstetrician to the Hospital of the University of Pennsylvania; Fellow of the American Academy of Medicine, etc.,containing the Pronunciation and Definition of over 26,000 of the Terms used in Medicine and the Kindred Sciences, along with over Sixty Extensive Tables. Second Edition. Philadelphia: W. B. Saunders, 925 Walnut Street. 1899. In Russia. Price, $1.25, net.

Next to the office shears, this little volume is the handiest thing about the office of The Medical Dial. We recommend it as an authority on spelling and pronunciation, and it will be an invaluable addition to any physician's office. It is so condensed and so conveniently arranged that any word or term may be found very quickly. The binding is absolutely perfect, with handy patent thumb index. In addition to giving the pronunciation and definition of 26,000 words, it contains several exceedingly valuable tables, the largest of which is a table of doses, in both apothecaries' and the metric system. The fact that a large edition was quickly exhausted is substantial evidence that it is a practical and useful lexicon. The present edition is up-to-date, and contains many new words.

THE HYGIENE OF TRANSMISSIBLE DISEASES: THEIR CAUSATION, MODES OF DISSEMINATION AND METHODS OF PREVENTION. By A. C. Abbott, M. D., Professor of Hygiene and Bacteriology, and Director of the Laboratory of Hygiene, University of Pennsylvania. Three Hundred and Ten pages, Illustrated. Philadelphia: W. B. Saunders, 925 Walnut street. Price, cloth, $2.00 net.

Preventive medicine and sanitary science are too frequently neglected by the profession, much to their disadvantage, for there are conditions in every community, notably in the smaller towns and villages, where the application of the principles of general hygiene by the resident physician would redound both to the welfare of the community and to the credit of the practitioner. Diphtheria, typhoid fever, and other transmissible diseases, can usually be traced to causes easily removable by proper sanitary measures. Wells contaminated by barnyard drainage, and cesspools pouring sewer gas into houses, are prolific causes of disease in both city and country. Physicians, as conservators of the public health, must take the lead in instituting sanitary measures.

Dr. Abbott has placed before the profession in convenient form the accepted methods of the authorities on sanitary science the world over. The work tells of the causation.

modes of dissemination and prevention of special diseases, such as typhoid fever, cholera, tuberculosis, influenza, venereal diseases, glanders, small pox, etc. Directions are given for prophylaxis in general against infectious diseases, such as vaccination, chemical measures, and special chemical disinfectants, heat and steam. Explicit directions are given in the care of stables, vaults, closets, cellars and cisterns. The book closes with the methods to be pursued in the management of communicable diseases and quarantine.

The author has presented a practical up-to-date text book, which should be on the table of every physician, and frequently consulted. By acting upon the suggestions given in this latest work on the subject the physician would do much to lighten his labors, and, at the same time, improve the environment of the community. F. F. C.

A TEXT-BOOK ON PRACTICAL OBSTETRICS. By Egbert H. Grandin, M. D., Gynecologist to the Columbus Hospital; Consulting Gynecologist to the French Hospital; late Consulting Obstetric and Obstetric Surgeon of the New York Maternity Hopsital; late Obstetrician of the New York Infant Asylum; Fellow of the American Gynecological Society, of the New York Academy of Medicine, of the New York Obstetrical Society, etc. With the Collaboration of George W. Jarman, M. D., Gynecologist to the Cancer Hospital, Instructor in Gynecology in the Medical Department of Columbia University; late Obstetric Surgeon in the New York Maternity Hospital; Fellow of the American Gynecological Society, of the New York Academy of Medicine, of the New York Obstetrical Society, etc. Second edition, revised and enlarged. Illustrated with Sixty-four full-page Photographic Plates and Eighty-six Illustrations in the Text. Philadelphia, New York, Chicago: The F. A. Davis Company, 1898. 8 vo. Pp. xix—461. Extra Cloth, $4.00 net; Sheep, $4.75 net.

The first edition of this excellent work was well received by the profession. In the second edition the author has thoroughly revised the work and has been most successful in his aim to maintain the position it has secured as the leading exemplifier of practical obstetrics from the modern standpoint. Several new plates and illustrations have been added, and altogether, the work is one which cannot well be spared from the general practitioner's library.

In no department of medical practice is the physician thrown so entirely upon his own resources, as in the practice of obstetrics. While a large proportion of cases are natural and easily managed he is liable at any time to meet with difficulties in which he must act for himself, and act promptly. In surgical operations he can generally choose a convenient time to operate, and if not confident in his own skill and dexterity, can get out of the difficulty by handing the patient over to a surgeon. The obstetrician must be an operator, and must frequently operate under difficulties and with incompetent assistants. For all these reasons the contents of this book should be familiar to the up-to-date physician.

TREATMENT OF PELVIC INFLAMMATIONS THROUGH THE VAGINA. By William R. Pryor, M. D., Professor New York Polyclinic, etc. Two hundred and forty-eight pages. Philadelphia: W. B. Saunders, 925 Walnut Street. Price, cloth, $2.00, net.

This is an especially valuable book to the general practitioner, as it is an elaboration of Professor Pryor's lectures at the New York Polyclinic, and gives in a practical manner the treatment found most successful by the author.

The author deserves especial commendation for going into minute detail in describing the line of treatment laid down for a given case. Many authors impair the usefulness of their books by the omission of just these things. The technique is familiar to the author and oftentimes its description seems unnecessary, but to the practitioner, who is not familiar with the procedure or operation, the technique is the essential portion. The book is a valuable aid to every physician who treats diseases of women, and we take especial pleasure in commending it to the profession generally. The work is well illustrated with cuts showing both technique and instruments. F. F. C.

A TEXT BOOK ON THE DISEASES OF THE NOSE AND THROAT. By D. Braden Kyle, M. D., Clinical Professor of Laryngology and Rhinology, Jefferson Medical College, etc.; 646 pages, with one hundred and seventy-five illustrations, 23 of them in colors. Published by W. B. Saunders, 925 Walnut Street, Philadelphia. Price $4.00 in cloth; $5.00 in sheep or half morocco, net.

While Dr. Kyle has departed somewhat from the plan usually adopted by writers of text books, yet his arrangement is good, and his text is clear, and at the same time concise, two very important points in a book intended primarily as a text book. Another point which has our hearty commendation is making each chapter complete in itself, even though it renders some repetition necessary.

As the work is intended for general practitioners, as well as for the student, it enters into many details of a general nature, which

assist in throwing light on the subject under consideration. This is an excellent feature, from the fact, patent to every specialist, that there is a constant relation between the nose and throat, and many systemic diseases.

The illustrations are made from the author's own cases, some of the anatomical illustrations being composite. The cuts of instruments are of those used for the most part by Dr. Kyle, and as a matter of course represent in each case only one of many adapted to the purpose mentioned. This is commendable, as the student needs definite and exact information as to instruments and their use. The author follows the same course in advising a line of treatment for the different diseased conditions. He has endeavored to be as specific as possible, and the result is a most excellent book from every standpoint.

The illustrations are superb, especially the colored ones, and show very clearly the condition or organ under consideration, thus adding very materially to the value of the work to the student. The text and paper is all that could be desired, and the publisher, Mr. Saunders, is to be congratulated. F. F. C.

A CONVENIENT BOOK.

We are in receipt of a handy Brochure, "Hints on Practical Urinalysis," by Chas. C. Yarbrough, M. D., published by Frederick Stearns & Co., of Detroit, Mich.

It is a very useful little book for physicians, who have analyses to make, as it gives a detailed description of reagents, apparatus required, solutions, how to make and use them, urinary tests, normal and abnormal constituents of the urine, the different sediments found in the urine properly classified, Urinary Calculi, a model of recording urinary analyses, and the etiology and symptoms of some of the more important genito-urinary diseases.

Frederick Stearns & Co will send a copy of this excellent book to any physician requesting it, free of charge. F. F. C.

TREATMENT OF ACUTE BRONCHITIS.

The treatment of acute bronchitis varies somewhat with the age of the patient. A few general directions apply to all ages. Equalization of the circulation and stimulation of all lagging emunctories are important early measures. In all cases purity of air, equable room temperature (69 to 70 F.), and a slight excess of moisture in the air are essential.

In young infants the child should be clad rather more warmly than ordinarily, a cotton or woolen jacket should be applied, and the chest should be rubbed twice daily with camphorated oil or a mixture of equal parts of oliveoil and amberoil or turpentine. A croup-kettle, to the water in which has been added compound tincture of benzoin (one fluidrachm to one pint) should be employed for ten or fifteen minutes every hour or two, and in winter a broad, shallow pan of water should be kept in front of the source of heat in order, by its evaporation, to moisten the air of the room.

Ordinarily in the early stage a simple fever-mixture with the addition of a small quantity of ipecac will be all that is required. Of the febrifuges the citrate of potash with or without the addition of small doses of tincture of aconite in accordance with the fever and cardiac excitement will be found useful and simple. After the formation of mucus has started and the fever has subsided the chloride of ammonium, in doses of one-fourth to one grain, should replace the fever-mixture.

Ordinarily no further medication is required except for the use of mild laxatives to keep the bowels thoroughly opened. In removing the extra covering on the chest care is to be taken that the change be not made too rapidly, but that small portions should be taken away at a time. If at any time marked oppression of breathing occurs from accumulation of mucus, the production of vomiting by a full dose of ipecac will cause prompt clearing of the tubes. In feeble children stimulants may be required, and where the heart's action is weak the carbonate or aromatic spirit of ammonium may, with advantage, be used instead of the chloride.

In older children and adults a preliminary hot foot-bath, to equalize the circulation and start the emunctories, is of value. The application of mustard poultices or turpentine stupes to the chest certainly gives relief and hastens cure. The use of a cotton or woolen jacket is not so important as in infants, but is of value. In those beyond the age of infancy ammonia salts can be used earlier in the disease, the chloride acting especially well in combination with compound licorice mixture. Usually no other medicine, save possibly laxatives, is required unless the latter part of the attack is prolonged, in which case small and frequently repeated doses of the oil of eucalyptus, gaultheria, or copaiba may be given in capsule.

In the aged it is important to sustain the general strength and especially to watch the condition of the right heart. Stimulants are usually necessary; and it is important to change the patient's position at short intervals in order to facilitate expectoration and to avoid the effects of gravity in causing congestion or atelectasis of dependent parts of the lung. Many expectorant drugs other than those mentioned above are employed, but it is a question whether their action upon digestion does not offset any possible good effect upon the bronchitis.—Sajous' Annual and Analytical Cyclopedia of Practical Medicine, Volume II., pages 23 to 25.

THE URINE IN DISEASE.

Dr. Formad (Tri-State Medical Journal) concludes an interesting article as follows:

1. Sediment in the urine has no significance unless deposited within twenty-four hours.

2. Albumin in the urine does not indicate kidney disease unless accompanied by tube-casts. The most fatal form of Bright's disease —contracted kidney—has little or no albumin.

3. Every white crystal in urine, regardless of shape, is a phosphate, except the oxalate-of-lime crystal, which has its own peculiar form; urine, alkaline.

4. Every yellow crystal is uric acid if the urine is acid, or a urate if the urine is alkaline.

5. Mucous casts, pus, and epithelium signify disease of the bladder (cystitis) or other parts of the urinary tract, as determined by variety of epithelium.

6. The urine from females can often be differentiated from the urine of males by finding in it the tessellated epithelium of the vagina.

7. Hyaline casts (narrow) blood, and epithelial casts signify acute catarrhal nephritis. There is much albumin in this condition.

8. Broad hyaline casts and epithelial dark green granules and oil casts signify chronic catarrhal nephritis. At first, much albumin; later, less.

9. Hyaline and pale granular casts, and little or no albumin signify interstitial nephritis.

10. Broad casts are worse than narrow casts, for the former signify a chronic disease.

11. The urine should be fresh for microscopical examination, as the micrococci will change hyaline casts into granular casts, or devour them entirely in a short time.

12. Uric acid may, in Trommer's test for sugar, form a peroxide of copper, this often misleading the examiner into the belief that he has discovered sugar. Thus when urine shows only sugar, other methods of examination must be used—preferably the lead test.

13. The microscope gives us better ideas of the exact condition of affairs in examination of urine than the various chemical tests.

Dr. Francis Crosson, author of "A Description of the Climate of New Mexico," which appeared in the June Dial, has returned to his permanent home in Albuquerque, after an extended sojourn in Minneapolis and other cities of the north and east.

A man in Philadelphia has been awarded $1,500 damages for an attack of typhoid attributed to contamination of his water supply by the overflow from a sewer left uncompleted by the city.—Sanitarian.

Index Medicus.

Enclosed figures indicate prices for single copies.

MEDICAL REVIEW, London. (1 s. 6 p.). August: Notes, 10 pp.—Reviews, 27 pp.—Hospital reports, 8 pp.—Epitome current literature, 29 pp.

MEDICAL REVIEW OF REVIEWS, New York City. (10). September: Some unusual cases of appendicitis, with complications, A. Vanderveer, Albany, N. Y.

MARITIME MEDICAL NEWS, Halifax. (10). August: Progress of medicine and surgery during the last third of the nineteenth century, A. B. Atherton.—Disorders of the menopause, E. W. Cushing, Boston.—The care of the tuberculous (ed.).

MEDICAL FORTNIGHTLY, St. Louis. September 1: Psychic element in disease and suggestion, A. McDonald, Wash.—Physiology (chapter 12), A. L. Benedict, Buffalo.—Vertigo. P. Zenner, Cinnti. —September 15: Scattered leaves from a physician's diary (No. 9), A. Abrams, San Francisco.

THE LARYNGOSCOPE, St. Louis. (20). September: The offending middle turbinal (illustrated), Edwin Pinchon, Chicago.—Fibrinous rhinitis, D. J. Gibb, Wishart, Toronto.—Acute septic rhinitis of childhood, L. S. Somers, Phila.—Parasitic affections of the pharynx, E. O. Sisson, Keokuk, Ia.

MEDICAL REGISTER, Richmond. (15). August: An interesting case of hereditary syphilitic dactylitis, L. C. Bosher, Richmond.—The relations of the coroner to the undertaker, W. H. Taylor, Richmond.—Summer diarrhea of infancy, Jesse Ewell, Ruckersville, Va.—Facial paralysis, W. S. Beazley, Richmond.—The germ of yellow fever (ed.).

OCCIDENTAL MEDICAL TIMES, San Francisco. (20). September: Address at commencement exercises of Cooper Medical College, R. J. Voorsanger.—Valedictory, C. N. Ellinwood ('99).—Resection of the rectum and bladder, colostomy, cure of artificial anus, recovery, demonstration of patient, C. G. Levison, San Francisco.—Relation of the recuperative powers of nature to medical practice, G. L. Simmons, Sacramento.—A study of Caesarean section, four cases, W. S. Thorne, San Francisco.

INTERNATIONAL MEDICAL MAGAZINE, New York City. (20). September: On the practical aspects of dorsal percussion and in particular of the percussion of the spine, (illustrated), Wm. Ewart, London.—Bacteriology: its practical value to the general practitioner, W. W. Babcock, Phila.—Causes of urinary retention in the male: its treatment (clinical lecture), O. Horwitz, Phila.—Local treatment of corneal ulcer, W. L. Pyle, Phila.—Use and abuse of the douche, D. B. Kyle, Phila.—Some points in relation to syphilis, J. D. Thomas, Pittsburg.—The prognosis and treatment of chronic sthenic gastritis (acid gastric catarrh), B. Reed, Phila.

CHARLOTTE MEDICAL JOURNAL, N. C. September: Relative efficacy of toxin and antitoxin in the treatment of tuberculosis, J. H. Williams, Asheville.—Strangulated inguinal hernia, F. T. Meriwether, Asheville.—The use of the ophthalmoscope in internal medicine, L. W. Dean, Iowa.—Shall we operate in every case of appendicitis? V. Harrison, Richmond.—The preventability of typhoid fever, R. P. Smith, Sunnybrook, Md.—Iritis, R. S. Magee, Topeka, Kan.—The cure of epileptics, J. F. Edgerly, Oakboure, Pa.—Surgical procrastination, C. P. Thomas, Spokane.—Gonorrheal ophthalmia, J. B. McFatrick.—Abstracts of 100 of the leading articles of the month.

NATIONAL MEDICAL REVIEW, Washington. (10). September: The physician and the Negro problem (ed.).

NEW YORK LANCET. (10). August Some acute pulmonary troubles, R. S. Michel, Chicago.—Rational treatment of consumption, J. G. S. Coghill.—Case of toxaemia with convulsions, C. L. Fraser.

JOUR. OF COMPARATIVE MEDICINE AND VETERINARY ARCHIVES, Philadelphia. (30). August: Meat-inspection and milk-inspection, H. F. Palmer, Brooklyn.

MEDICAL EXAMINER, New York City. (20). September: The life insurance examiner, G. D. Kohle.—Some practical hints regarding the making of examinations, Joseph Kucher.

BROOKLYN MEDICAL JOURNAL. (20). September: Prevention and modern treatment of tuberculosis, Geo. W. Brush.—Metric system in prescriptions, E. H. Bartley.—Ovarian cyst with torsion of the pedicle, F. W. Wunderlich.

DENTAL DIGEST, Chicago. (25). August: A step in advance in the treatment of Riggs' disease, Alden Mills, New York.—Resume of the important changes that have taken place in dentistry during the last thirty-five years, J. N. Crouse, Chicago.

JOUR. OF MISS. STATE MED. ASS'N, Biloxi. (10). September: Acute lymphadenitis, report of a case, L. F. Fox, Water Valley, Miss.—Pneumonia; or, commonly known as lung fever, W. W. Robertson, McComb City, Miss.—The mind in the presence of disease, L. M. Guess, Crystal Springs, Miss.

MEDICAL MIRROR, St. Louis. (10). September: Ununited fracture in childhood, Edmund Owen, London.—Athletics in their relation to the male genito-urinary organs, G. F. Lydston, Chicago.—Faith, fraud and suggestion in therapeutics, T. F. Lockwood, Butler, Mo.—A dozen dietetic dots, by the editor, I. N. Love.

JOURNAL OF SCIENTIFIC MEDICINE, Chicago. (10). August: The worthlessness of beef extracts, Jno. Madden, Milwaukee.—Report of a case of eclampsia, V. F. Mueller, Milwaukee.—Alleged dangers of peroxide of hydrogen in surgery, G. M. Blech, Chicago.—First warnings of glaucoma, W. H. Pole, Detroit.

WISCONSIN MEDICAL RECORDER, Janesville. (10). August: Preparing for old age, Joseph Adolphus, South Atlanta, Ga.—Glaucoma (8th paper), J. A. Pratt, Aurora, Ill.—Observations on refraction, by the editor, J. P. Thorne.—Treatment of alopecia, with clinical reports, R. C. Kenner, Louisville.—Pure milk (ed.).—Protargol (ed.).

MEDICAL BULLETIN, Philadelphia. (10). September: The physiological and medical treatment of insomnia, by the editor, John V. Shoemaker.—Remarks upon a case of pulmonary tuberculosis, George W. Pfromm, Philadelphia.—Masochism, sadism, and feticism, R. M. Niles, Pleasant Mount, Pa.—Sleep, sleeplessness, and hypnotics (ed.).—Hysterical ear (ed.).

JOURNAL OF MEDICINE AND SCIENCE, Portland, Maine. (10). September: Nasal catarrh; its surgical treatment, Arthur F. Sumner, Concord, N. H.—Extracts from the ancient history of medicine, F. J. Robinson, Fairfield, Me.—Extra uterine pregnancy, W. G. Sawyer, Madison, Me.—Masso-therapeutics, E. H. Judkins (continued from August).—Prevention of consumption (ed.).—Is there a relation between nervous prostration and hysteria (ed.).

KANSAS CITY MEDICAL LANCET-INDEX. (10). September: Some thoughts on various forms of infection, M. P. Overholser, Harrisonville, Mo.—Healing frauds and superstitions, a sermon by Rev. C. M. Bishop, Nevada, Mo.—A woman and a tumor, and how they parted, H. E. Pearse, Kansas City.—The treatment of broken and deformed nasal septa, Hal Foster, Kansas City.

MEDICAL HERALD, St. Joseph, Mo., August: Fibro-adenoma mammae. Enucleation, B. L. Eastman, Kansas City.—Leucorrhea and its treatment, C. Kenner, Louisville.—Modern treatment of fractures, Edward A. Tracy, Boston.—The etiology of phthisis, a summary of scientific points involved in the Churchill theory, R. W. Gardner, New York City.—Some reflections on the principles of medicine (ed.).

AMERICAN JOURNAL OF SURG. AND GYN., St. Louis. (10). August: Surgery and insanity, H. W. Coe, Portland, Oregon.—The gynecologist in relation to the insane, Ernest Hall.—Vaginal hysterectomy, incidents and complications, W. Lindley, Los Angeles.—The sigmoid, some of its diseases, W. Burke, Los Angeles.—Abdominal pains, C. P. Thomas, Spokane.—An operation for cancer of the rectum which did not cure, C. E. Case, Tacoma.

OCCIDENTAL MEDICAL TIMES, San Francisco. (20). August: Intravenous injections (bacilli) of mercury in the treatment of syphilis, Dudley Tait, San Francisco.—A case of foreign body in the heart, W. Ophuls, San Francisco.—A case of marked deformity of the nails (onychogryphosis) in anesthetic leprosy, Douglass W. Montgomery, Cal.—Remarks on diagnosis and treatment of pulmonary tuberculosis, Geo. W. Cole, Los Angeles.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Chicago. (10). Sept. 9: A fallacy of the rest cure treatment, G. M. Gould, Phila.—Cataphoric treatment of cancer, G. B. Massey, Phila.—Treatment of aneurisms by extirpation; with report of popliteal aneurism treated by this method, J. C. Oliver, Cincinnati.—Some complications resulting from rectal operations, W. M. Beach, Pittsburg.—Use of acetanilid in various combinations as a substitute for many proprietary drugs and mixtures, L. F. Bishop, N. Y. C.—Progress in serum therapy, G. W. Cox, Chicago.—Experiments with paraldehyde, C. C. Hersman, Pittsburg.—Accidental wounds of the female bladder, F. H. Wiggin, N. Y. C.—Intestinal treatment of tuberculous peritonitis, H. T. Byford, Chicago.—Relative toxicity of cocain and eucain, A. H. Peck, Chicago.—Disease of the pancreas, F. E. Wallace, Monmouth, Ill.—The microbe of yellow fever (ed.)—Nagging wives and nervous husbands (ed.).—The pathogenesis of Acromegalia (ed.).—Sept. 16: A profitable medical education, an address, H. O. Walker, Detroit.—Gall-stones, consideration of their etiology, diagnosis and operative treatment, J. Ransohoff, Cincinnati.—Gall-stones, observations on their treatment, A. J. McCosh, N. Y. C.—Our tubercular patients, whom to send and where to send them, J. F. McConnell, Las Cruces, N. M.—Treatment of endrometritis by drainage and irrigation, A. H. Goelet, N. Y. C.—The importance of a knowledge of the development or evolution of the child in the prevention of children's diseases, E. Stuver, Fort Collins, Col.—Prognosis of laryngeal tuberculosis, R. Levy, Denver.—Relation of uterine disease to some of the insanities, C. C. Hersman, Pittsburg.—Treatment of chronic croup, E. Rosenthal, Philadelphia.—What are antitoxins? R. G. Eccles, Brooklyn.—Condensation and preservation of milk by refrigeration, H. O. Marcy, Boston.—Non-malignant strictures of rectum, their surgical treatment, J. B. Bacon, Chicago.—Reed and Carroll's reply to Sanarelli (ed.).—Zoöphilism and degeneracy (ed.).

SANITARY HOME, Fargo, N. D. (10). October: Foods of colonial New England, H. D. Perky, Worcester, Mass.—A brain poultice, D. H. Reeder, Chicago.—Infant dietaries, by the editor, E. F. Ladd. —The meat problem (ed.).—Fermentation of tobacco (ed.).

MEDICAL COUNCIL, Philadelphia. (15). September: The post-partum use of the abdominal binder, E. F. Tucker, Portland, Oregon.—Antistreptococcic serum in puerperal septicaemia, H. J. Richardson, Canmore, Alberta, Canada.—Albumoses in dietetics, Jno. Zahorsky.—On the change of life in women (concluding article), A. H. P. Leuf, Philadelphia.—Organic and functional diseases, incident to the menopause, treated by electricity and cataphoric medication, with report of cases, G. W. Overall, St. Louis.—Rational therapeutics, a plea for the use of the active principles in medicine, G. E. Day, Millville, N. J.—Local treatment of a cold in the head (first paper), E. B. Gleason, Philadelphia.

MEMPHIS LANCET. (10). August: Gunshot wounds in civil practice, W. L. Estes, South Bethlehem, Pa.—Enuresis nocturna in the female, Gustav Kolischer, Chicago.—A clinical study of chorea (Memphis Lancet $25.00 prize paper), Edwin Williams, Memphis.—Atypic malaria in children, with a case in point, Rosa Engelmann, Chicago.—Is epidemic cerebro-spinal meningitis a communicable disease (ed.). September: The operative treatment of exophthalmic goitre, Karl Doepfner, Chicago.—Differential diagnosis of the continued fevers, M. Goltman, Memphis.—The continued fevers of the south, etiology and laboratory features, Wm. Krauss, Memphis. —Nature and art in the cure of disease, John M. Farrington, Binghamton, N. Y.—Treatment of post-partum hemorrhage, Alfred Moore, Memphis.—Quinine in malarial hemoglobinuria (ed.).

PENN. MEDICAL JOURNAL, Pittsburg. (25). August: Some injuries of parturition, especially of the perineum, F. P. Ball, Lock Haven.—The treatment of acute injuries of the brain, based on indications of cerebral anaemia of engorgement, with report of cases, J. H. Anderson, Pittsburg.—Remarks on nephrectomy, with a plea for the more certain and earlier diagnosis of conditions requiring it, C. P. Noble, Philadelphia.—A note on the employment of solutions of toluidin-blue in the treatment of external inflammatory diseases of the eye, C. A. Veasey, Philadelphia.—Some of the legal results of advanced medical legislation, W. S. Foster, Pittsburg.—State Board of Health and antitoxin, T. D. Davis, Pittsburg.—Observations on Nature and her methods, W. R. Hockenberry, Slippery Rock.—Revision of the U. S. pharmacopoeia (ed.).

AMERICAN JOURNAL OF INSANITY, Baltimore, July: Some of the problems of the alienist, Frederick Peterson, New York.—The legal versus the scientific test of insanity in criminal cases, Carlos F. Macdonald, New York City.—The care of the insane in farm dwellings, G. Alder Blumer, Utica.—The nature and principles of psychology, Boris Sidis, New York.—Our work and its limitations, Edward C. Runge, St. Louis.—The puerperal insanities, H. A. Tomlinson, St. Peter, Minn.—The role of wound infection as a factor in the causation of insanity, A. T. Hobbs, London, Ont.—The desirability of close connection between the psychopathological laboratories and hospitals for the acute insane, Samuel B. Lyon, White Plains, N. Y.—Some difficulties in the retraction theory, W. L. Worcester, Danvers Insane Hospital.—Treatment of the sick and insane in Persia, James P. Cochran, Urumia, Persia.—Progress in the clinical study of psychiatry, Edward Cowles, Waverly, Mass.—Clinical Cases, IV., pseudo-dementia paralytica uraemica, Henry J. Berkley.

JOURNAL OF TUBERCULOSIS, Asheville, N. C. (25). July: Some notes on the tuberculin test (1), E. O. Otis, Boston.—The diagnosis of early phthisis, L. P. Barbour, Boulder, Col.—The early diagnosis of pulmonary tuberculosis, C. F. Denny, St. Paul.—The diagnosis of joint tuberculosis, J. K. Young, Phila.— Report of twelve cases of tuberculosis, treated with watery extract of tubercle bacilli, J. Sutherland, Spokane.—The local treatment of lung diseases, B. F. Lyle, Cincinnati.—Use of protargol in diseases of the larynx and pharynx, H. J. Chapman, Asheville.—The prevention of tuberculosis (continued ed.).

PENNSLYVANIA MEDICAL JOURNAL, Pittsburg. (25). September: Address in medicine, J. C. Lange, Pittsburg.—Mechanical treatment of ptosis, (illustrated), E. B. Heckel, Pittsburg.—Some clinical observations on diseases of the skin, J. V. Shoemaker, Phila.—Four cases of carcinoma of the breast treated by the cataphoric method, G. B. Massey, Phila.—Puerperal septicaemia, G. W. Wagoner, Johnstown.—Intoxication from toxalbumins and other toxins, Mary McD. Shick, Reading.—Diphtheria in the Rosella foundling asylum and maternity hospital of Pittsburg; treatment with antitoxin, A. Koenig, Pittsburg.—A case of myxoedema, E. H. Small, Pittsburg.—Tuberculosis following typhoid fever, F. U. Ferguson, Gallitzin, Pa.—Relapse in typhoid fever, L. H. Mayer, Johnstown.—Diagnosis of mild cases of small pox, W. D. Haight, Johnstown.

VIRGINIA MED. SEMI-MONTHLY, Richmond. (10). August 25: Mr. Lawson Tait, the man and his work, J. Price, Philadelphia.—Life and work of Dr. John B. Hamilton, L. Eliot, Washington.—Rheumatism, etiology, pathology and treatment, A. A. Young, Newark, N. Y.—The typhoid bacilli, a few facts concerning its favorable abiding place in the human system, and the most successful method by which its poisonous toxine may be eliminated, J. J. McEvoy, Norfolk, Va.—Howard Kelly's proctoscope as a factor in the diagnosis and treatment of ulceration of the rectum, L. Straus, St. Louis.—Thought as a correlative force, E. J. Bergen, Washington.— September 8: Colds, E. Cutter, N. Y. C.—Dangers which lurk in the schoolroom, how safeguards may be easily provided, W. B. Meany, Louisville.—The peritoneum and some of its morbid phenomena, W. L. Peple, Richmond.—Do patients recover from general peritonitis? I. S. Stone, Washington.—The use of toluidin-blue in external ocular inflammations, C. A. Veasey, Philadelphia.—A case of brain abscess, with peculiar symptoms, G. K. Sims, Honolulu.—Pseudocatalepsy, W. M. Phelps, Colonial Beach, Va.—A case of tubal abortion, J. W. Bovee, Washington.

MEDICAL RECORD, New York City. (10). August 26: The report of a case treated with yellow-fever serum, A. H. Doty, N. Y. C.—Bright's disease, or nephritis, W. S. Mills, N. Y. C.—Mucocele of the maxillary sinus, W. Scheppegrell, New Orleans.— The evils of the ritual practice of circumcision, A. Miller, N. Y. C.—Hernia of the vermiform appendix, L. L. Hill, Montgomery, Ala.—Laborl's wound and the question of bullet extraction (ed.).—The operative cure of ascitis due to cirrhosis of the liver (ed.).— The physical development of Japanese wrestlers (ed.).—September 2: Psychotreraphy; or, suggestion as a cause and cure of disease, H. H. Seelye.—The etiology of scarlet fever, W. J. Class, Chicago.—A preliminary report upon the use of carbolic acid in the treatment of mastoid wounds and chronic suppuration of the middle ear, W. C. Phillips, N. Y. C. —An international language for scientific men, is it a possibility? R. Ellis, Utica, N. Y.—Overcrowded professions (ed.).—The clinical manifestations of ulcerative endocarditis (ed.).—A fatal case of benzine poisoning (ed.).—September 9: Reflex irritation, with special reference to the eye strain, a factor in ner-

vous and mental disease, C. A. Drew, Bridgewater, Mass.—Scarlet fever reproduced by inoculation; some important points deduced therefrom, J. W. Stickler, Orange, N. J.—On ozone and its generation by the static current for therapeutic use, J. M. Bleyer, N. Y. C.—The plague in Europe (ed.).—The work of the marine-hospital service for 1898 (ed.).—Atrophy of the optic nerve following profuse hemorrhage (ed.). —The coroner's office and the daily press (ed.).—The treatment of sinus-thrombosis of otitic origin (ed.). —September 16: Floating liver and its clinical significance, Max Einhorn, N. Y. C.—The practical treatment of typhoid fever, B. M. Taylor, Greensburg, Ky. —Facts and fallacies in uranalysis, T. W. Schaeffer. —Demonstration of two cases of extrophy of the bladder, with suggestion for a new operation, J. H. Branth, N. Y. C.—Clinical course of gastric ulcer (ed.).—Smallpox and vaccination (ed.).

GAILLARD'S MEDICAL JOURNAL, New York City. (50). September: Treatment of labor in abnormal pelvis, Edwarl P. Davis, Philadelphia.—Surgical complications of typhoid fever, Hugh M. Taylor, Richmond.—How to treat boys and girls approaching the age of puberty, Josephine M. Wetmore, Grinnell, Ia.—The death-dealing long-tube nursing bottle, Ernest Wende, Buffalo.—Jefferson and vaccination, G. W. Drake, Hollins, Va.

NEW ORLEANS MED. AND SURG. JOURNAL. (20). September: The importance of the early recognition and treatment of catarrhal diseases, W. Scheppegrell, New Orleans.—Some food impurities and chemical preservatives, Q. Kohnke, N. O.—The lessons of the yellow fever in New Orleans in 1879, forty-one cases and nineteen deaths, crude scientific sanitation and no quarantine, E. Souchon, N. O.—Christian (?) science (ed.).—Milk supply of N. O. (ed.). —Free public baths in N. O. (ed.).

BUFFALO MEDICAL JOURNAL. (20). September: Importance of early diagnosis and surgical intervention in fractures of the skull, Marshall Clinton, Buffalo.—Neurasthenia from the standpoint of a general practitioner, C. W. Coulter, Oil City, Penn. —Experience, judgment and luck, Nelson W. Wilson, Buffalo.—What shall be the minimum standard of requirements for admission to the study and practice of medicine? William Warren Potter, Buffalo.—Oculist vs. optician, a protest, John J. Finerty, Buffalo.

NEW YORK MEDICAL JOURNAL. (10). August 26: The anthemion, Wallace Wood.—Subcutaneous tenotomy, biographical notes, A. B. Judson.—Gunshot wounds of the chest in the Spanish-American war, H. S. Greenleaf.—The use of parotid-gland extract in the treatment of ovarian disease, E. P. Mallett.—Extradural spinal meningeal hemorrhage, S. D. Hopkins, Denver.—The puerperal state and puerperal hemorrhage, derivation and classification, W. B. Gossett, Louisville.—The etiology of yellow fever (abstract of a marine-hospital report, a public document).—Report of six cases of pneumonia treated with antipneumonic serum, Antonio Fanoni.—September 2: The sphere of laryngology (an address), W. E. Casselberry, Chicago.—Is the so-called American voice due to catarrhal or other pathological conditions of the nose? J. W. Farlow, Boston.—Observations on the treatment of hay fever, B. Douglass, N. Y. C.—Bovine tuberculosis in its relation to man, E. Moore, Albany.—The therapeutic value of oxygen, W. L. Conklin, Rochester, N. Y.—Cerebral and meningeal syphilis treated by intramuscular injections of insoluble salts of mercury. Some points in technique. J. C. Stinson, San Francisco.—Fracture of the lower end of the radius, C. Beck, N. Y. C. —A test-case for taste, N. T. Beers, Brooklyn.—Adeno-carcinoma of the nose, J. E. Newcomb, N. Y. C.—Traumatic neuropsychosis, C. E. Ide, Chicago.—Synechiotomy of the stapes for improving the hearing in chronic suppurative otitis media residua, E. B. Dench, N. Y. C.—Dust in the etiology of tuberculosis, M. Girdansky.—September 16: Atypical forms of pneumonia, a clinical study, E. Palier.—Hysterical blindness, A. T. Muzzy, N. Y. C.—Seasickness, J. C. De Vries.—Epiphyseal separation of the ends of the humerus, M. Lucid, Syracuse.—Clinical report of an epidemic of infantile diarrhea, I. J. Jones, Austin, Texas.—Epileptic eye strain, C. M. Capps, Knoxville, Tenn.

NEW CURE FOR GERM DISEASES.

Dr. Oscar Loew, one of the expert vegetable pathologists of the Agricultural Department at Washington, has developed to what he believes to a point of practical use, a new treatment for germ diseases, which promises to supersede the serum treatment now in use in diphtheria, fevers and many other diseases. The experiments have reached a stage where they can be tested in hospitals.

The treatment is similar in some respects to the serum treatment, but depends on a different principle, one basic idea being the presence of a class of ferments known as enzymes, which are produced by the same bacteria that produce the disease.

It is because of the production, or rather over-production, of a certain enzyme that a disease such as typhoid will "run its course" and die out of the system. The bacteria in this case, it is stated, are simply killed out by the ferment they produce.

The object of the new treatment is to produce a pure enzyme, which, introduced into the human system, will kill the disease germs without injuring the patient.—Gaillard's Medical Monthly.

"Sare," he cried, "you ar-r-re no zhentleman!"

The hot blood dyed the officer's brow.

Sac-r-re!" he hissed; "do you know who eet ees zat you insult?"

"Pouf!" cried the civilian; "I do not care."

"Do you veesh to fight?"

"Yes. Now and at once."

"Do you not know zat I am one of ze best swor-rdsmen in Fr-r-rance?"

"No. It makes no deeference."

"And do you want to die now?"

"Yes. Right now."

There was a moment's silence.

"I would gladly keell you," said the officer, "but eet ees not possible at zee pr-r-resent moment."

"Not possible. Why not?"

"Because I vill nevaire consent to fight wiz swor-r-rds zat are not pr-r-roperly r-r-rendered antiseptic. Bonjour, monsieur."—Ex.

An early symptom of locomotor ataxia, says Weiss of Vienna, is the inability of the patient to walk backward.

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is *theoratically* and *practically* effective and harmless; it contains only one active ingredient, **OXYGEN,** the preponderating element in the healthy living organism.

It is indicated internally in all forms of dyspepsia and digestive disturbances, butryric fermentation, gastric catarrh, gastric ulcers, etc., externally as a local application in the treatment of specific inflammations of the mucous membrane, chronic inflammatory conditions characterized by fetid discharges and wherever morbid conditions characterized by fetid discharges and wherever morbid conditions or foul secretions exist.

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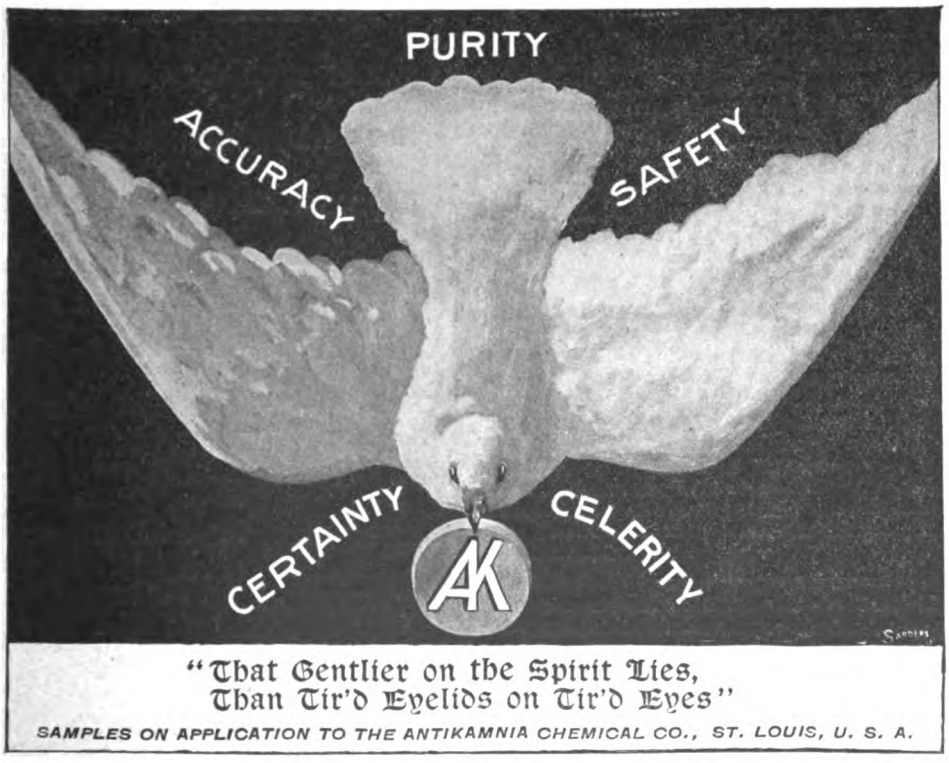

PUBISHER'S DEPARTMENT.

It is said that a drowned man is always found floating with face down, while a woman floats with face up. The difference is probably due to the difference in anatomical construction.

The recently adjourned congress of tuberculosis concluded that there is absolutely nothing known that is practical about the cure of consumption, but the application of formaldehyde was mentioned with favor.

Mr. Henry A. Snyder, of Boston, representing Mellin's Food Company, having spent several weeks in the Twin Cities among the physicians, anticipates going to his Southern field soon, to pass the winter, after visiting several of the important towns of northern Minnesota. He made the Dial office a pleasant visit during the past month.

Decreased vitality from almost any cause is remedied by the administration of Hagee's Cordial, and the list of diseased conditions in which the Cordial is serviceable is a long one, and includes Consumption, Scrofula, Rickets, Skin Diseases, Rheumatism, Chronic Bronchitis, Epilepsy, Chronic Dysentery, Chlorosis, and all wasting diseases generally.

Dr. J. K. Gailey, Clinical Professor of Surgery, Detroit College of Medicine, in giving his experience with "Maltine with Coca Wine" says, it is unquestionably superior to anything he has ever tried as a galactagogue. In one case, particularly, the mother was enabled to nurse her child, which she had not done with previous children. He considers it doubly efficacious in that it builds up the woman while stimulating the lacteal secretions.

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404 Masonic Temple.

(This table is illustrated on 3d page of cover.—Pub'r.)

NO BETTER ON THE MARKET.

Candon, Ore., Aug. 18, 1899.

Peerless Battery Co., Chicago, Ill.

Gentlemen: Your battery is O. K. I have used it with most gratifying results in a case of paraplegia in a boy three years old; couldn't stand alone, no, not even turn around in bed, when I commenced using your battery. Now, he can't walk, but he can stand alone, and crawls all over the place on hands and knees. And for headache and neuralgia it's the thing par excellence. My list is off to the Peerless Battery Company for the best Faradic battery I ever saw. DR. S. K. LIMA.

Dr. S. L. Kilmer, of South Bend, Indiana, who is the author of one of the original articles in this issue of the Dial, is the publisher of a very compact and serviceable pocket day book, journal and ledger, combined, which saves much time and labor. The price is $2.00 per copy. Should any physician reading this wish a descriptive circular, a postal card will bring one. At the same time request another circular on "Dr. Kilmer's Tracheotome," an instrument that is

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Table Plate, in case with Bevel Plate Glass in top, with High Tension Coil, Galvanic Circle, with Double Cell Collectors, Milliampere Meter, Pole Canger, etc. Price $43.00. Price for this sale **only $32.50**

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recommended for safe, easy, speedy and bloodless tracheotomy. This device makes the operation nearly, if not quite as easy, as the ordinary hypodermic injection.

In the treatment of Nervous Diseases and General Debility, McArthur's Syrup Hypophosphites demonstrates its restorative powers. Here it is not the stimulating action of the remedies usually classed as tonics that is needed. The organic powers of the system are already taxed to their utmost ability to carry on the physiological processes of life. The Hypophosphites of lime and soda gives the much-needed effect in these conditions—not that of a stimulant by irritation, but that of a true nutriment to the starving tissues. Its tonic effects are permanent as they are the effects of a richer blood supply, bringing healthy food and oxygen to the tissues. Thus the patient is gradually brought up to his normal condition.

SECONDARY SYPHILIS.

Dr. John J. Caldwell, of Baltimore, takes the position that those cases of syphilis which go on from bad to worse are those in which the patient will not take antisyphilic treatment regularly, or they are instances where mercury, or the iodides, do not agree with the patient. In cases of secondary syphilis, particularly those where mercury has been given for several months, Dr. Caldwell maintains that great assistance can be brought to the patient by giving him the iodides in a form that is readily assimilable—one that will not disagree with the stomach. No form of the iodides pleases Dr. Caldwell as much as Henry's Tri-Iodides. This he gives in doses of two drachms in water, forty minutes before each meal, and the last thing before retiring at night. Some cases are treated alone with the Tri-Iodides, but where the stomach is intolerant to mercury, he gets the best results from Henry's Tri-Iodides when no mercury at all is given.

A WANT FELT AND FILLED.

If the doctor had never accomplished anything more definite in his life work than the relief of pain, than amelioration of human suffering, he would not have lived in vain. It is all very well to say that pain is physiological, that it is the cry of the nerve for more blood, yet its continuance cannot be borne by the patient, even by the most heroic Spartan. Long continued pain is dangerous, and while of course we never wish to obtund and remove it so completely as not to be able to ascertain its cause, and remove the same, yet, the best interest of our patient requires from time to time the administration of that which is opposed to pain. Remedies like opium, which relieve the pain and at the same time are exhilarating and alluring in their effects, are most ofttimes dangerous in the remote demoralization which they produce upon our patient. A remedy for the relief of pain which does not tie up the secretions, which carries with it no exaltation and no fascinations which tend in the direction of developing drug habits, is a desideratum. Five-Grain Antikamnia Tablets certainly meet this necessity. Antikamnia is also more prompt and decided in its action in labor than opium, and has none of the unpleasant after-effects. It may be continued in smaller doses to control after-pains, and rather favors than interferes with the secretion of milk.

A FAMOUS EXPRESSION.

Professor Gibson, one of the pioneers in the development of scientific medical teaching in the United States, was asked, by one of his students at the University of Pennsylvania, how to obtain a comprehensive, accurate knowledge of medicine that would enable the physician to make a correct diagnosis, and

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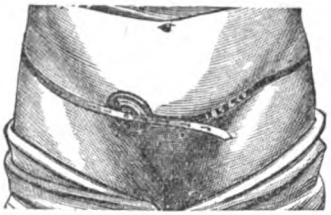

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execute proper treatment. Dr. Gibson's reply has become inseparably connected with his name and memory. It was "Principles, principles, principles." By this, of course, was meant that, however varied were the manifestations of disease, they were to be comprehensively grasped only by a knowledge of the fundamental principles of physiology, pathology and therapeutics. The symptoms of disease, however manifold, could be intelligently interpreted only on this philosophic basis. Strictly consistent with this inexorable law is the fact that all conditions of depression and exhaustion of the system can be appropriately and effectively treated only be re-awakening the dormant and torpid nutritive functions. The crying need of the emaciated tissues and impaired vital functions is for food, the natural restorative. In most cases, however, there is not only an indisposition to take food, but the digestive organs are so enfeebled that they cannot digest and assimilate food —their functions are suspended.

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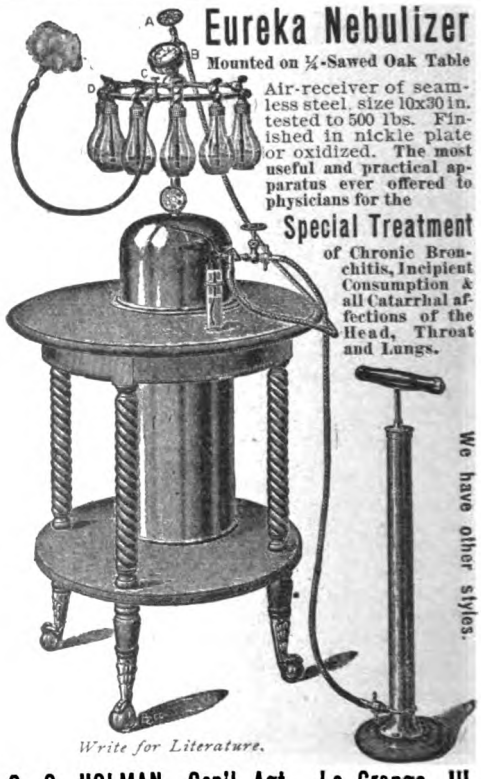

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grees), only to rise again rapidly. The general phenomena are more accentuated when the maceration is injected warm into the periosteum, the animal being often seized with nausea and falling on its hindquarters. The temperature falls four or five degrees and remains so for twenty hours; the stomach is hard and sensitive to the touch. If, however, injected into the veins of a rabbit, the liquid produces, even while injecting it, violent shocks, which intensify in proportion as the dose is increased. Generally fifteen to twenty cubic centimetres suffice to produce death. The animal falls on its flanks agitated by convulsions, and asphyxia ensues in a few seconds. If the thorax be at once opened, the heart will be found to be distended with blood, immobile, and all the veins swollen. The blood is black and coagulates rapidly. In the ventricles small clots are already observed. Allowing a few minutes to elapse before making the autopsy, the coagulation will be completed in the vessels, and one can withdraw from the heart clots which reach into the aorta and pulmonary artery.—London Health.

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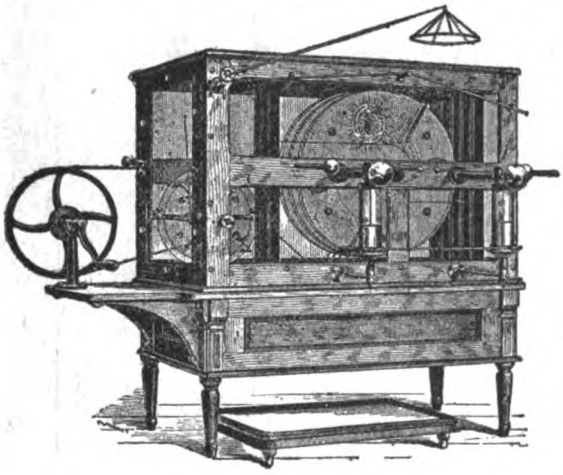

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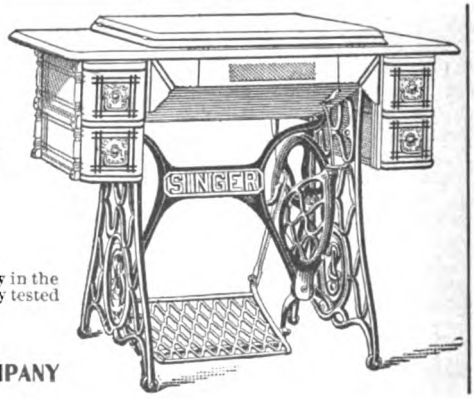

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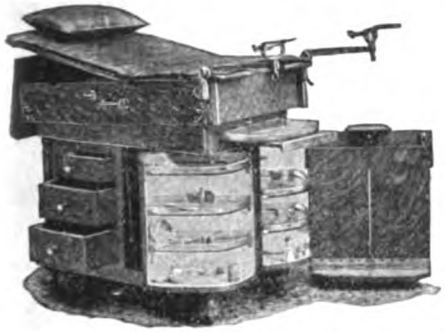

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OCT 12 1900

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A Monthly Record of Medicine and Surgery.

Vol. I. No. 12. MINNEAPOLIS, NOVEMBER, 1899. $1.00 per Annum. Single Copies 10c.

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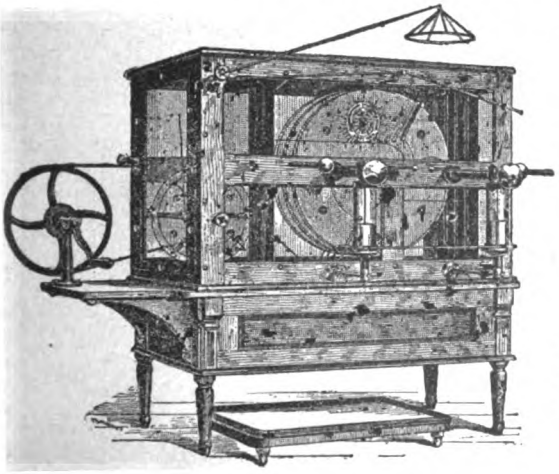

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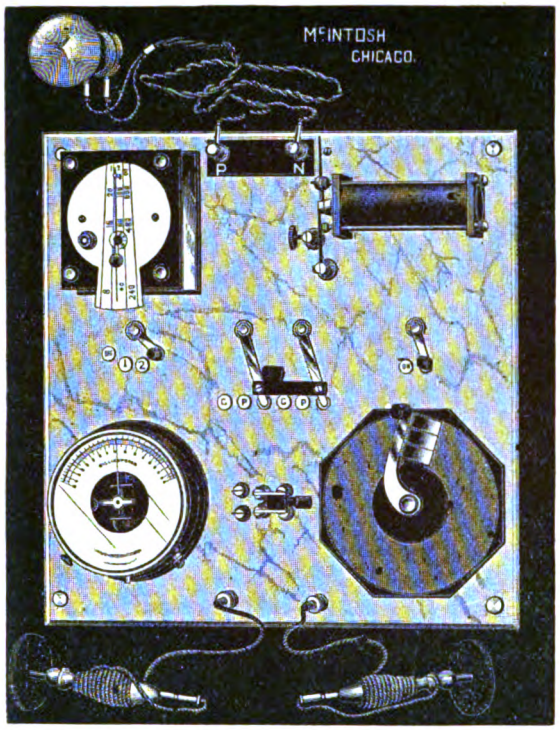

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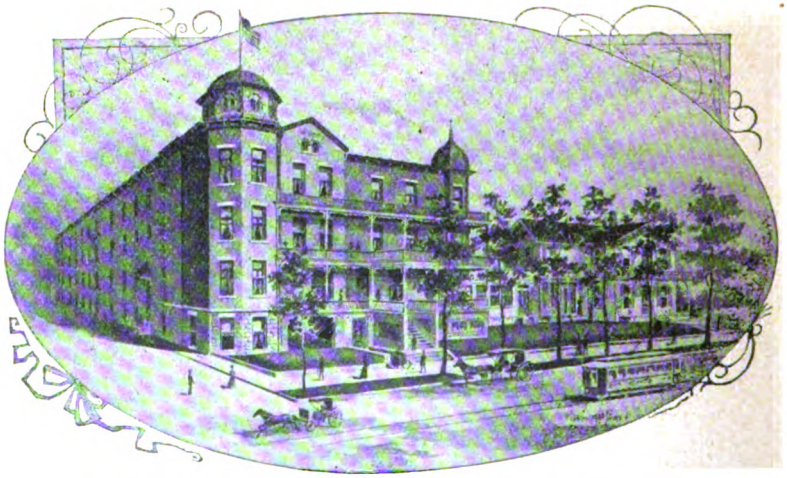

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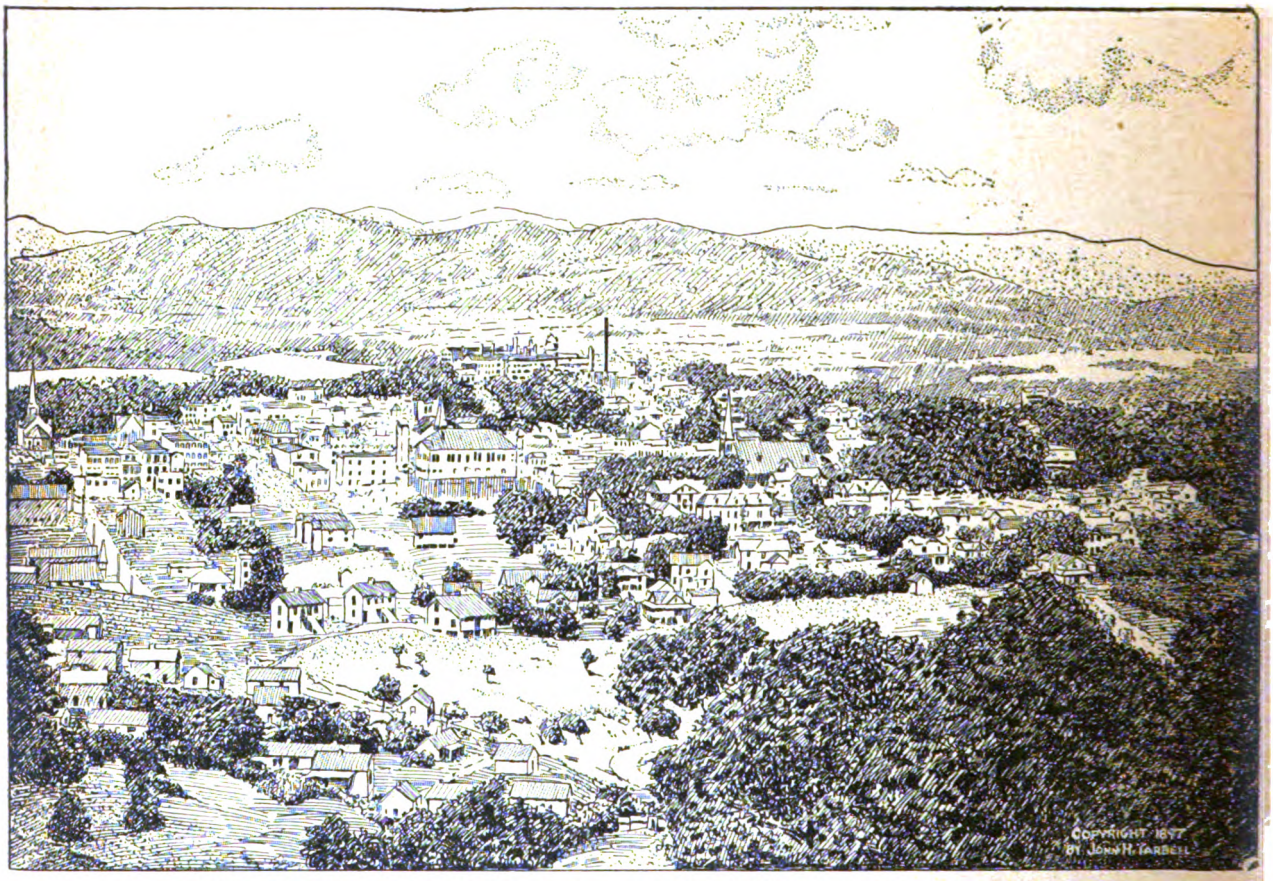

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SEE OPPOSITE PAGE.

PEN PICTURE OF ASHEVILLE.

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On her eastern border hangs the lace-like drapery of the ocean's throbbing billows; her uplands bend beneath the great weight of the three great staples, tobacco, cotton and corn, while her western section rises grandly, in great billowy hills and towering peaks with charming valleys resting peacefully between, and mountain streams coursing joyously through vale and gorge, tossing their crystal waters in silvery cascades and deep-toned water falls.

The fact is not generally known and here is one of the surprises, that in western North Carolina there are forty-three mountains more than 6,000 feet high, not bare, bald peaks of dismal rocks, but slope and summit are robed in the rich verdure of nature, a delight to the eye and affording beautiful and ever changing vistas. All these are higher than Mount Washington, and besides there are more than eighty which approximate 6,000 feet in altitude, and innumerable peaks exceeding 4,000 feet in height.

Away up in the low hills of Canada this picturesque chain of mountains starts on its course, winding along through New Hampshire, Vermont, New York, Pennsylvania and Virginia, growing in majesty and grandeur as it stretches southward, and attaining in Carolina and Tennessee by far its greatest altitude and massiveness. Continuing its course in offshoots into South Carolina, Georgia and Alabama, it sinks its heads, is merged into the lowlands, and becomes lost to view near the gulf.

In the very heart of those bold mountains of western North Calolina, a region abounding in nature's best efforts, full of picturesque effects both fascinating to the eye and awe-inspiring to the soul, stands the subject of this sketch,, ASHEVILLE, "The Land of the Sky," in a "Garden of the Gods," where human health and human happiness are in sweet accord, where crystal water gushes forth in innumerable springs, from an untainted soil where malaria is unknown and where ideal climatic conditions make the place a delightful sanitarium for the invalid and a perfect home for the healthy and strong.

On a plateau 2,500 feet above the sea level, sits this QUEEN OF AMERICAN MOUNTAIN RESORTS for all seasons, surrounded by an amphitheater of tree-clad mountains, in the center of a circle embracing the territory bounded by the Mississippi river, the Gulf of Mexico, the Atlantic ocean and the great lakes. The entire region is picturesque, full of novelty and interest, an ideal resort for pleasure, recreation and health. The high altitude and low latitude insure cool summers and mild winters, the latter shorn of their harshness, inducing to daily exercise in the open air in shooting, riding, driving or short mountain excursions on foot. Neither in summer nor in winter are there extremes in temperature, and the maps prepared by the government at Washington show this to be the ideal thermal belt of America, formed by the peculiar topographical conditions existing on the Asheville plateau.

That Asheville is the great Sanitarium par excellence for all classes of health-seekers, for those who suffer from exhaustion brought on by office work of long-continued heat, the sufferers from hay fever and all forms of head, throat and lung trouble, for those debilitated from advanced years who would withdraw from the tumult of business and city life to rest in the midst of mountain peaks, and in an atmosphere bracing, full of ozone and sunshine, is best attested in the words of many noted visitors of recent years.

Just where the beautiful Swannanoa, "Nymph of Beauty," one of the loveliest of mountain streams, whose course the train follows, merges into the picturesque and historic French Broad, is Asheville.

On a rugged plateau 2,500 feet above the level of the sea this "Queen Mountain City of the South" affords a haven for the residents of the heat stricken parts of the country. Though it is difficult to convince northern people that it is cooler 400 miles south of Chicago than it is in the Windy City, such is really the case. Seldom does the thermometer get above 90 degrees Fahrenheit in the shade and for the person in ill health or the one on pleasure bent, there is no better place than Asheville.

The Great Southern railway, than which there is none better equipped or more ably managed in the Union, traverses this entire section of natural and historic interest. Its train service from every standpoint is unexcelled. From the west tourists connect with the Southern railway at Louisville, Ky., or at Cincinnati with the Queen & Crescent Route. Through sleeper is run daily from Cincinnati to Asheville without change.

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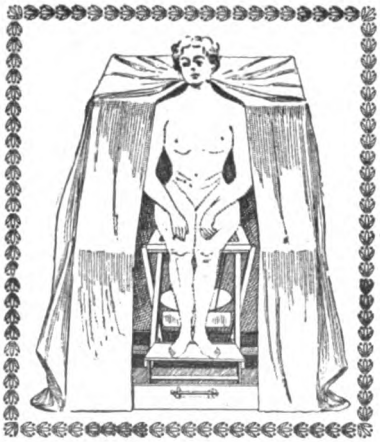

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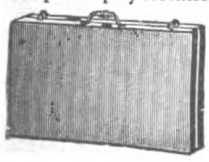

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THE MEDICAL DIAL

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Original Articles.

THE PART OF THE STATE IN THE PROGRESS OF MEDICINE AND SCIENCE.

By Franklin Staples, M. D., Winona, Minn., President Minnesota State Board of Health.

The important part in aid of the progress of science taken by different departments of the government of the United States and by the several states of the union has been recognized, and the results of the same are not unknown. The account here attempted must be mainly confined to work and results accomplished in individual states rather than to what belongs especially to the nation, and this may be given only in brief outline—a few facts illustrative. A brief mention, however, of national institutions and affairs may be made in passing.

BY THE GENERAL GOVERNMENT.

The Smithsonian Institution, in different departments of natural science, has had and continues to have its important place in the educational work of the government and its published reports constitute an important element in the present literature of science.

The scientific work of the National Agricultural Department, in various ways in connection with diseases of grains and other agricultural products and with diseases of animals, has a wide field of usefulness. It is not only in such lines of service of vast financial value to the country, but investigations and practical work in this department have been of great advantage in the study of diseases of man, and in practical ways have aided the work of preventive medicine.

Another important division of the science work of the government is that of the Weather Bureau. Observations in this department have advanced to such a degree of accuracy and completeness, as not only to be of great advantage to commerce on sea and land, directing the movements of the same with a view to safety, but, as an aid in the study of climatic influences, atmospheric changes, temperatures, etc., have come to be of much scientific and practical value in the world of medicine.

In preventive medicine and general sanitation the work undertaken by the former National Board of Health is remembered, and the national and international work of sanitary inspection and control, now carried on by the Marine Hospital Service, has a practical value which cannot be overestimated.

Of late years the importance of a knowledge of the vital statistics of a country has been realized in connection with observations concerning disease prevalence and causes of death. State departments of health have provided for the collection and have made valuable use of such statistics. This work has its place in the national service and is included in the present comprehensive work of the United States census.

No mention of the works of the general government which relate to sanitary science should omit that of the War Department. Work in this department is especially directed to sanitary provisions for the army, but it is not limited to this alone. It has its part in the general public health service and its educational influence is felt and acknowledged. Surgeon General Sternberg has been a leader in advanced work during the time of his service and his diligent labor has been in lines having place in the higher practice of the present time. His practical work in bacteriology is widely known and his publications have become the preferred text books of the schools. The army medical school has the advantage of instruction from this source. An able assistant, with others in the office of the surgeon general, is Deputy Surgeon General Charles Smart, who is known to sanitary scientists of the country in his works pertaining to practical hygiene. In the advance of the times the co-operation of the schools of medicine and science of the country, with the departments of the national administration under the management of such directors, has been most advantageous and satisfactory.

BY THE STATES.

Management in different governments in matters pertaining to the progress of science necessarily varies. Ours is a confederation of states. It has been claimed that national rather than individual state administrations may more completely and efficiently exercise the function of sanitary investigation and con-

trol. It appears, however, that in this country the management of affairs pertaining to preventive medicine has its appropriate place in departments both of state and nation. While the general government has long had its part in the advancement of science in various ways, the states, as such, have found their opportunities largely in what has come to light in the development of modern state medicine.

The province of preventive medicine is necessarily with preventable diseases. A word here will be allowed concerning the present field of operation and what has come to pass tending to render work therein more successful. Not only has the scope and extent of the great class of communicable diseases been more clearly defined than formerly in the advance of modern science, but the nature of individual diseases, their modes of propagation, the character and behavior of the different infective agents, are more definitely understood. The work of many scientists in different countries has borne and is now bearing its fruit. The advance of knowledge in pathological anatomy, the advent and development of the science of bacteriology and the consequent increased knowledge of the etiology and pathology of many diseases have afforded definite direction for treatment and the use of preventive measures.

Sanitary laws, state and national, are founded upon the principle of the right and obligation of government in the protection of the lives and property of citizens. The enactment of such laws and the formation of state executive organizations for service under the same has characterized the action of the more advanced governments of the world, especially during the latter part of the present century. Recent great advances in departments of natural science relating to infectious diseases in man and animals have afforded valuable directions and made the way possible for the effective preventive work now undertaken by the state; and the state, in turn, while engaged in the field work of the public service, with the diligent use of means at hand, has provided means for promoting the further advance of science in practical ways. Witness the establishment of laboratories and the support of working scientists for study and practical work in bacteriology and pathology.

The warfare of sanitation against the forces of infection is both defensive and aggressive. The lines of advance have been in three principal directions, as follows: First, attack is made upon the sources and supplies of the invading forces. The places of origin and the conditions favorable to the production of infective germs are looked for and located. Houses and house surroundings are inspected with reference to garbage disposal, sewerage, ventilation, etc. Of not the least importance in reference to possible sources of typhoid fever and the infections of certain other diseases is the condition of public and private water supply and the quality of food products.

Further, in the matter of looking for specific causes of disease with reference to the removal of the same, we have the advantage of certain new or improved methods of diagnosis; for instance, the tuberculin test for determining the existence of tuberculosis in animals and man, the serum diagnosis of typhoid fever by blood examination, bacteriological examination to determine the presence of diphtheria, etc.

These examples illustrate—the few for the many. Investigations in the etiology and pathology of infectious diseases, made by use of means and methods such as these, serve to render the biologic laboratory not only an institution for practical work in preventive medicine, but also a school of instruction for medical scientists.

Again, when the infective agent is found to exist, means are employed to prevent its passage and to diminish its opportunities for further invasion. This is done principally by authoritative isolation of the infected. Late developments in science relative to the nature and behavior of different infective germs have become valuable aids in determining the character, extent and time limit of quarantine required in different cases and the necessary disinfection of persons and premises.

A further and a most important means of preventing the progress of infection is that of securing immunity of the individual to the action of specific infections. The forerunner of this method was the discovery of vaccination by Jenner near the close of the last century. Notwithstanding the influence of this example, nearly a century was required to secure further advancement along this line. But principally within the last quarter of a century scientists in the leading countries of the world, by diligent and continuous study, have succeeded in bringing to light much valuable and practical knowledge concerning the use of attenuated or modified virus of specific infectious diseases in safely securing immunity to further attacks. Managers of state and other laboratories are now actively engaged in the preparation of material for this work in serumtherapy, so called, are affording instruction concerning the use and advantages of the same and by much experimental study are aiding the work of further advancement.

In the matter of recent advancement of the standard of medical education in this country, which is now known as one of the most important movements favoring the progress of science in recent times, state enactments requiring higher qualifications for medical practitioners within the limits of the states are entitled to principal credit. While the extension of departments of science pertaining to medicine, and the development of new lines of study, such as that belonging to the science of

bacteriology in late years, have had their place in making advance necessary, yet without the requirements of the state, opposing forces would likely have prevented the advance at present realized. As it is, the struggle with short-sighted and selfish interests has been considerable, but the interests of higher education have been able largely to gain the ascendency, and the result is as we now see it. With the present state of medicine as it is, and in view of the part now assumed by the state in aid of the progress of medicine and science, there is occasion for rejoicing at what now exists and for the hope of continued gain in the future.

This brief mention is but an outline, and partial at that. Any account in detail, to be at all complete, would require a volume. This is as yet unwritten. Further facts may be obtained from various state and government reports and from observation in different departments of public works.

* THE TREATMENT OF PULMONARY TUBERCULOSIS BY THE INHALATION OF ANTISEPTIC NEBULÆ.

By Homer M. Thomas, A. M., M. D., Chicago.

At the Louisville, Ky., meeting of the Mississippi Valley Medical Association, I had the privilege of presenting microscopical proofs of the penetrability of vaporized medicaments into the pulmonary alveoli. Previous to that time all text-books on this subject stated that it was impossible for nebulæ to reach beyond the smaller bronchial tubes. A demonstration of the fact that nebulæ *do* reach the pulmonary alveoli raises the question of their efficacy in the treatment of pulmonary phthisis. Work demonstrating the value of this form of medication in the treatment of pulmonary tuberculosis has been going steadily on until the present time.

It is the purpose of this address to present such clinical facts as have been obtained through the use of this special form of medication in the treatment of pulmonary phthisis. There is no specific treatment of this disease. Cures are reported upon every hand through the media of many agencies. The disease being a complex one in its varied manifestations, each case should be treated upon such special lines as are individually indicated. The basis of all successful treatment is in the maintenance of nutrition. As a corollary to this, is the influence of selected climate, judicious exercise, rest, baths, internal medication and all other collateral agencies which stimulate vital resistance.

* Read before the Medical Section of the Mississippi Valley Medical Association, at its Annual Meeting in Chicago, Oct. 4, 1899.

ANTISEPTIC NEBULÆ IN THE ROLE OF CURE.

Having surrounded each case with the essential conditions for repair of the pulmonary lesion, what relation does the inhalation of antiseptic nebulæ bear in the role of cure? The answer to this query involves a consideration of the pathological basis upon which nebulization of antiseptic medication rests. It is proven beyond doubt that these nebulæ penetrate through the ramifications of the respiratory tract wherever it is possible for air to go. The first question to determine, then, is, whether the medicament can reach the origin of the disease; and will it prove effective when the origin of the disease has been reached, is the second problem.

The air vesicle route is the rational one, since tubercle bacilli are discharged through the air, and are found in the sputum. The absence of general infection in curable cases shows that the possibility of connection with blood vessels is not large. All inflammatory areas are areas in which the mechanism of extra vesicular interchange is materially interfered with. Large numbers of tubercle bacilli are discharged by the air vesicles. Few get into the blood or lymph current; therefore the air vesicles must be in closer touch with the tubercle bacilli. The presence of the large quantities of pigment from the air around tubercular areas shows that considerable absorption through the lymphatics from air vesicles is possible. A nebulized antiseptic having reached the area beyond the limit of current finds a greater probability of falling on the epithelial covering and of being absorbed from it than if it reached only to a zone of current, for in such an extra current area no force is operating save gravity. On reaching an extra current zone nebulized antiseptics fall on squamous epithelium and encounter active phagocytic cells. In a zone of current they fall on ciliated epithelium and are wafted to the outside. These mechanical laws hold good whether the foreign body be tubercle bacilli, dust, or oils in suspension.

Since this is true of healthy lungs, is it true when we speak of tubercular lungs? Nebulized antiseptics suspended in the air will reach the cavities and air vesicles of tubercular lungs just as well as if these lungs were healthy. But where there are considerable zones in which the air vesicles are obliterated these areas are necessarily very difficult to approach from the side of the air vesicle. Oil globules falling in the air vesicles of the neighborhood are picked up by the phagocytes, absorbed, and, finding their way into the lymph and into the blood, reach these masses of tubercular overgrowth with as much readiness as they can be reached in any other way. It is true that the presence of large areas without air makes success through air routes very difficult. Admitting that encapsulated tuber-

cular foci cannot be reached by nebulized medicaments, is there any known therapeutic agent which can reach them? None that I know of. Nature has walled off these encapsulated tubercular foci by connective tissue barriers and in that way makes an effort to effect a cure. It therefore follows that the most rational way to treat locally these tubercular encapsulated foci is to attempt to render antiseptic their contiguous areas.

The pathologic conditions we have to deal with are those of lowered vital resistance in the lung tissue; development of tubercle bacilli; hyperplasia of fixed cells; formation of epithelioid cells; development of knot-like foci where the tubercular bacilli multiply; giant cell formation in which there is no new capillary formation; inflammation; degeneration of the blood vessels, lymphatics and air passages. In these areas, leucocytosis, further retrograde changes, mixed and secondary infection.

That antiseptic nebulæ have a beneficial influence on the parts of the lung they reach there is no doubt. In such places the laws of osmosis and dialysis unite to aid in the prevention of new invasion. That these antiseptic nebulæ do not reach the encapsulated areas is no argument against the efficacy of this method of treatment, for neither can these areas be reached through the blood nor the lymphatics, by antitoxins or any method of hemotherapy, for no blood vessels or lymphatics reach these walled off foci. Therefore our therapeutic resources are confined to persistent efforts toward preventing an extension of the tubercular processes.

SCOPE OF NEBULIZATION.

What is the scope of nebulization? 1. Control of cough. 2. Relief of dyspnea. 3. Intimate contact of antiseptic nebulæ upon 1400 square feet of respiratory capacity. 4. Inhibition to the extension of tubercular foci.

The advantage of controlling cough by inhalation, rather than internal medication, is self evident. By bringing to the inflammatory areas through direct contact specially adapted formulæ of expectorant or anodyne combinations, you allay many or all of the distressing symptoms from cough.

The relief of dyspnea, incident to the blocking of the larger or smaller tubes by catarrhal products, is often marked. By means of expectorant types of nebulæ this as a rule is readily accomplished.

To properly use the antiseptic nebulæ in the treatment of pulmonary phthisis it is essential that an abundance of compressed air be supplied at a steady pressure of from fifteen to thirty pounds to the square inch. The air should pass through a series of antiseptic chambers which entirely free it from all impurities. When it is purified and then compressed a final measure of purification should be given by its passage through the oil of cloves. In cold weather it is better that the air should be heated to a temperature of 60° to 70° F. before using for the purpose of producing nebulæ. Given an abundance of air that is properly prepared for use, a well devised and constructed nebulizer is placed at a point convenient for the patient's use. Into this nebulizer a variety of formulæ can be used; the selection of the special combination suited to each case will depend largely upon one's experience in the use of this form of medication, and from a close study of the physical findings in the chest of each patient. Where it is desired to relieve cough a mixture containing the tr. of stillingia and beechwood creasote, with lavolin as a base, is quite often efficient. For the relief of the dyspnea, which so often arises from a catarrhal blocking of the tubes, both large and small, expectorant combinations with carbonate of ammonia, syrup of scillæ, syrup of pruni virginæ, with lavolin as a base, often give marked relief. Should the case be one in which there are specially urgent symptoms to relieve, and where there is general toxemia from the disease, recourse should be had to the use of the well known and tried antiseptics. Nebulization of eucalyptus, oil of cloves and beechwood creasote have been often effective. A mixture of ten per cent. iodoform in solution with sulphuric ether and lavolin has been found very valuable. Frequently the use of pure Ceylon cinnamon oil in solution, with lavolin as a base, in a preparation of about ten per cent., is an excellent stimulant for the bronchial mucous membrane.

Whilst all of the foregoing are standard antiseptics, and have their range of usefulness in individual cases, it has been found that they do not inhibit the growth of culture media, hence nothing pathologically curative can be claimed for any of them. They are useful more for the relief of symptomatic conditions than for curative results. We have, however, at our command one antiseptic, a powerful germicide, from which there is reason to feel hopeful that valuable results will be secured in cases of pulmonary phthisis. This antiseptic is formalin. It has been found by experiment that culture media placed in an atmosphere saturated with a respirable solution of formalin are markedly inhibited, and, in some cases, entirely arrested in their development. With this fact, upon which to estimate the antiseptic value of formalin, we feel justified in claiming it to be our most valuable remedy in the treatment of pulmonary tuberculosis by inhalation.

In using formalin I begin with a four per cent. solution of the forty per cent. aqueous commercial solution in water. This is placed in the nebulizer and violently agitated by means of compressed air. I do not nebulize this solution, but favor evolution of the gas

through a mechanical mixture and agitation due to the pressure of compressed air. In a short time cases develop and acquire an increasing tolerance for the formalin mixture, and by degrees its strength can be increased from four per cent. up to twenty per cent. One invariable rule should be observed in the use of this therapeutic agent, and it applies with equal force to those previously mentioned, to instantly cease their administration as soon as cough ensues. By pursuing this plan the tolerance of the patient is readily secured and the time in which nebulization can be administered correspondingly lengthened.

RESULTS AT THE COOK COUNTY HOSPITAL FOR CONSUMPTIVES.

There has within a year been established in this county a hospital devoted exclusively to the treatment of consumptives. This building is completely equipped with chemically pure compressed air, abundantly distributed, and the treatment of pulmonary phthisis by nebulization is there extensively used. I have records of a number of cases treated there since the 21st day of February, 1899, and desire to call your attention to some of the results secured from the treatment. All of the cases were in the second and third stages of phthisis. They numbered fifty, all males. Of these we have a gain in weight among fifteen of the fifty averaging from two pounds to twelve pounds; a loss in weight among thirty-five, and in five cases there was neither loss nor gain in weight. When we reflect that the patients coming to this institution were in the worst possible condition of general health, all suffering from advanced tubercular processes in their lungs, that the food supplied is of poor quality, and in every case inadequate to the proper nourishment of the patients, I feel that the showing made in the short time elapsing, from February 21st to August 15th, is a very creditable one. I am quite aware of the inaccuracies that statistical statements may lead one into; I also appreciate the errors of deduction that one may easily make from such a general aggregation of cases, but I feel warranted in asserting that a very large proportion of the improvement, forty per cent., obtained in the number of cases enumerated, has come from the persistent saturation of their respiratory passages with antiseptic nebulæ.

As far as the work has progressed it certainly opens up a vista of therapeutic possibilities. As I have already stated, a lung with a tubercular process shows an immense amount of newly formed connective tissue. This is an effort on the part of nature to wall off the pathological process. If nature is successful there is nothing left but scar tissue, the tubercular process is inclosed and the patient recovers. If nature does not succeed, secondary mixed infection takes place, we have sepsis, and the patient dies. There is only one cure, that is by walling off the tubercular process by embryonal tissue. In my experience I am led to conclude that medicated vapors are of great value in favoring such a process. Nebulization always did, and always will, occupy a secondary place in the treatment of this disease; its function is that of a supportive role, rather than the development of curative properties *per se*. We should remember that in advancing infection with the tubercular bacillus it is the vital resistance of the cells and the possibility of the reproduction of embryonal tissue which we must strive to secure. How much any treatment assists these processes it is difficult to say, but only along the lines of such assistance can success be reached. The treatment is not necessarily an effort toward the extermination of tubercular germs, but the stimulation of the cellular structures of the system by which the patient may resist invasion of the germs as well as the toxins which are manufactured and thrown out by the germs themselves.

THE MECHANICAL METHODS.

There are many mechanical methods for the introduction of antiseptic nebulæ into the respiratory passages. A double glass tube, so constructed as to occlude the anterior nares, will enable the patient to inspire freely through the nasal passages. The nebulæ can be admitted by a single glass tube held between the lips slightly compressed, and inhalation will take place through the mouth as well as an admixture of atmospheric air through the nares. The preferable method is the use of a pure gum-rubber funnel top, such as is used for lavage of the stomach. This funnel top is readily adjusted to all the irregularities of the facial contour and very little of the nebulæ escapes during its use. With this contrivance deep inspiratory efforts can be made simultaneously through the nares as well as the oral opening. The period of deep inhalation should be regulated by the easy tolerance of the patient to the nebulized medicament. Cough is the only warning sign which should cause us to desist for a greater or shorter length of time in the use of the nebulæ. With increasing use on the part of the patient, the time of contact of the medicament with the respiratory passages can be greatly lengthened. Again, the nebulæ can be respired directly from the exit opening of the nebulizer. This is a good way for those commencing the treatment, as the larger admixture of atmospheric air renders the deep inhalation of the nebulæ less irritant.

As a supersaturation of the respiratory passages with this nebulæ is the desiderata aimed at, the whole atmosphere of the room in which the patient is placed should be completely filled. Under these conditions every

respiratory effort carries into the lungs a greater or less amount of nebulized medicament. So complete is the supersaturation attained that the expectoration of tubercular patients often has the characteristic odor of the medicament nebulized. The perspiration from the skin will also have this odor, and the ammoniacal odor of the urine is frequently lost in the characteristic smell of the nebulized medicament.

The adaptability of this form of treatment for individual use of patients in their homes is very wide. A great deal of mechanical ingenuity has been shown in efforts made to easily produce a large volume of compressed air for nebulization. Beginning with the small hand bulb nebulization, is only secured in a very inefficient and interrupted way. Passing from that primitive form up to the use of pumps, an almost infinite variety of mechanism has been devised. There is the hand pump, which is tiresome, and at best, can only be operated for a comparatively short time. Then there has been an effort made to reduplicate power by means of long lever pumps, rotary and circular. The most feasible and practical means of obtaining compressed air for nebulization, in localities where there is water supply to the homes, is in the use of the mechanism known as a compound pump. This pump is cylindrical in form. The water enters at the bottom and through a system of valves the pressure of the water operating upon the valves efficiently compresses the air and forces it out through the opening from which it is conveyed into the reservoir for use. The usual water pressure is from sixteen to twenty-five pounds to the square inch. By the use of compound pumps the pressure may be increased to thirty-five or forty pounds.

Should it be desired to take up nebulization to a considerable degree for the treatment of phthisical cases at home, facilities for the easy entrance of air into the pump are necessary. One of the first points to remember is to take the air from the highest point possible in the vicinity of the home so as to get it as free from surface contamination, odors and gases, as possible. In order to do this, after the piping has been placed at the highest point, there is put at the outer end, two or three screens varying in increasing fineness, so that the air is put at the outer end two or three screens preventing the ingress of any dust or solid impurities with the air. When the air is mechanically filtered and compressed there should be placed an antiseptic chamber for the purpose of holding in suspension some antiseptic oil, as oil of cloves or oil of wintergreen. After this purification has been secured the air is then ready for piping to any portion of the home where its use is desired. The plumbing connections should be made at the point of entrance of the water to the home, preferably in the basement, for the higher you carry the pump from the basement the greater the corresponding decrease in pressure. An apparatus, such as I have described, can be placed for about $100.

While the inhalation of antiseptic vapor is not a specific for tuberculosis of the lungs, yet it plays an important role as a supporting means to other methods of treatment. There can no longer be doubt of the penetrability of properly compounded and vaporized medicaments. Their value in the treatment of pulmonary phthisis is largely determined by the medicament used and the amount respired. Clinical experience has proven their value. The weakness of this method of treatment lies in the therapeutic action of the medicaments at our command, rather than in the mechanics for vapor production. Chemical researches of the future, we hope, will yet bring to our aid more powerful antiseptics than those now available; powerful in their selective antagonistic action upon the pathological conditions of pulmonary phthisis and yet harmless in their effect upon the healthy structures of the respiratory passages. We are strong in mechanism, weak in therapeutic resources.

A PLEA FOR THE ADOPTION OF THE INHALATION METHOD.

I believe the chances of successfully coping with pulmonary phthisis are greatly enhanced by the general adoption by the profession of the inhalation method. It makes possible the creation of a sterilized atmosphere for the respiration by patients in their own homes. Too long have the profession been under the shrewd and often unscrupulous domination of those interested in the "commercialism of climate." In many instances incurable cases have been sent long distances from home, at great expense as well as bodily discomfort, allured by false hopes of the climatic cure of phthisis. Prominent specialists in localities, supposed to have great virtue in the cure of this disease, have reaped great financial rewards from the credulous faith of the incurably sick, and, when at last the fallacy of such hopes has been demonstrated, the excuse is given that they came "too late," and, would they die at home, must return at once. No intelligent physician can deny the value of altitude in the treatment of selected cases of phthisis, but the great rank and file of these sufferers leave the comforts of home to share the discomforts of a residence away, when their disease is equally amenable to home treatment. I plead for greater discrimination in the selection of cases that leave their home climate for often an elusive hope of benefit in other altitudes. With our more intelligent appreciation of the causative factor in the production of this disease, with the valuable curative agencies we can surround our patients with at their own firesides, and with the additional

compensation that if cured at home they can forever remain there, we should use conscientious discrimination as to where and when we send our tubercular patients. While assiduously working to cure, by any means in our power, let us not neglect the broad field of the prevention of tuberculosis.

There is every probability that the absolute extinction of tuberculosis from the world is not far distant. It is inevitable that when the race becomes fully cognizant of the dangers from tuberculosis and the simple measures necessary to stamp it out of existence, they will arise and forever make this scourge a thing of the past. Most hopeful is the outlook for the accomplishment of this great result. Not alone are the masses awakening to the needs of the hour, but those in high places, even royalty itself in England, is championing the cause of race emancipation from tuberculosis. Innumerable societies are springing up in every village, hamlet and city throughout the land; prevention, like territorial expansion, is in the air, and so comprehensive is this reform in its scope that a great international conference for war on tuberculosis has recently held sessions in Berlin. Let us all do something to restrict this disease, so that with the dawn of the new century we may hope to see the tuberculosis problem solved by the most humanitarian methods, thanks to the combined efforts of physicians, health officers, statesmen, philanthropists and the good will of an intelligent people.

Marshall Field Building.

COMPLICATED UMBILICAL HERNIA WITH FÆCAL FISTULA

A Clinical Lecture Delivered at St. Mary's Hospital, Minneapolis, by James H. Dunn, M. D., Professor of the Principles of Surgery, Medical Department, University of Minnesota.

Gentlemen: We have here a very interesting and complicated condition. The patient, Mrs. "D," is 45 years of age, and though of small stature weighs 240 pounds. She has a large umbilical hernia, which began during childbirth, eighteen years ago. During these years it has gradually increased in size, until it has reached the size of a man's head, but has caused her, until lately, very little inconvenience she having retained it to some extent by a bandage.

About the 15th of January the tumor became painful and sensitive, and on the 18th severe vomiting, pain in the abdomen, and complete obstruction of the bowels, ensued. Hot applications were applied, and on January 25th the skin, which is said to have been red and fluctuating over this part of the hernial sac, broke through and discharged some pus and fæces. From the 18th to the 25th there had been complete obstruction of the bowels, vomiting, pain and abdominal tenderness. After ulceration through the skin, and discharge of fæces, all symptoms of obstruction subsided, but nothing has been discharged by the natural passage.

This history obtained from the patient, indicates that the sac became inflamed, and the intestine attached itself to the abdominal wall. This loop probably became twisted on its axis, causing complete obstruction of the bowels, and the patient was relieved from impending death by spontaneous perforation of the abdominal wall. These old, large umbilical hernias have a considerable direct mortality and a great tendency to relapse, even if the patient recovers. The subjects are very fat, the abdominal muscles much atrophied, and it is often extremely difficult to return the great mass of intestines and fatty omentum into the abdomen and bring the separated muscles anywhere near into apposition, at least without great tension.

In this case we have the further unfavorable conditions of extensive adhesions and a perforated intestine from the inside, while externally, as you see, the skin is extensively inflamed, irritated and infected by the discharge of fæces. It is therefore impossible to render the field of operation anything like perfectly aseptic. We have devoted a great deal of attention to the skin and abdomen for the last five days, since the patient entered the hospital, January 31, nevertheless there is an area of five or six square inches of skin very red and inflamed, and consequently septic. After the most thorough cleansing possible, of the abdomen, I poke a small piece of gauze into the fistulous tract to prevent further discharge of fæces, and sew a piece of rubber tissue over this bad area of skin in order to keep our operative field as clean as possible.

In removing the sac, it is often well to remove a part of this redundant skin. This is usually done by a vertical ellipse, but in this case, on account of this bad area of skin, I shall make a transverse ellipse which will make a long scar in the skin across the abdomen instead of up and down. Besides, I think, sometimes where the abdomen is very pendulous, this transverse skin incision is preferable.

Turning over the large flap of skin, we now open the hernial sac on the left—the side most distant from the fistula. After opening the sac throughout its whole length, we break up the adhesions, except that of the intestine about the fistula. After the whole sac is cleared away down to this point, we pack gauze about this coil of intestine, separate it from the sac, and now the question arises whether to resect the intestine or simply suture

the opening, which is frequently not very wide, and extends parallel with the intestine on its free border about three-quarters of an inch. I think there is not more than one-third of an inch in width gone. Freshening the edges slightly, I sew it with a fine silk, Lambert stitch. This, as you will see, reduces the lumen of the intestine very considerably, not, however, so much as would appear, because the contraction of the muscular fibers, from the irritation of sewing, makes it look almost lead-pencil in size for the present. Were the contraction really as great as it appears, it would be certainly unsafe, and we would have to make a resection. I am quite sure, however, that the decrease in the lumen of the bowel is not greater than one-third of an inch, therefore, I think I will not interfere with the action of the bowel.

Now we clear away the rest of the sac and this large diamond shaped piece of skin, fat, etc., and we have the situation cleared up so far; but, as you will observe, I have not been able yet to reduce this mass of abdominal contents. I enlarge somewhat the opening in the median line, and with great difficulty we succeed in getting the intestines and omentum back, but it would seem almost impossible to bring the widely separated rectus muscles together. We loosen them up on each side, and with much attention and difficulty finally succeed in getting them to nearly approximate. Under these circumstances we shall sew the muscular walls together with a silver wire, mattress stitch. The tension is altogether too great on these stitches in bringing the abdomen together, but I see no way to further reduce it, and while I fear there may be a recurrence of the hernia, under these circumstances, I feel that this is the best that can be done with safety.

We next close the skin with interrupted silk worm gut suture, and apply the usual abdominal dressings.

Note.—The patient made a remarkably good recovery, without suppuration, disturbance of intestinal function, or relapse of the hernia.

DOCTORS IN PERU.

A correspondent of the Chicago Record says that in Peru, South America, American practitioners in both medicine and dentistry are much preferred by the populace, but the native practitioners, realizing this, make it as difficult as possible for foreigners to secure the right. No American diplomas are recognized, and the practitioners are required to speak the Spanish language. They are obliged too to pass a rigid technical examination, both written and oral. This is "protection," and an application of the theory that is not relished by Americans who visit that country.—Peoria Med. Jour.

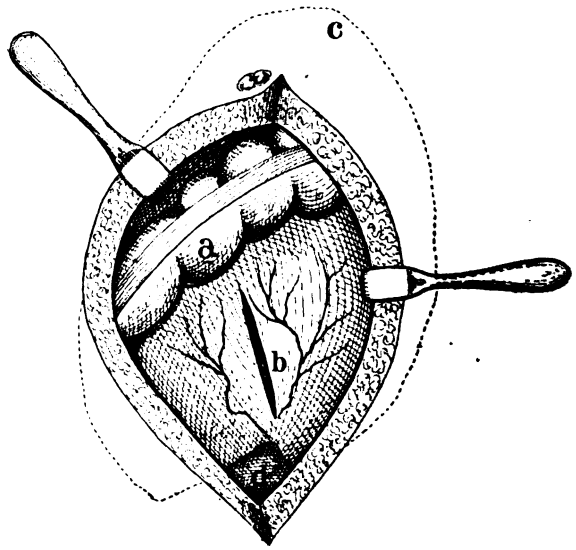
* A RETRO-PERITONEAL CYST.

By A. W. Abbott, M. D., Minneapolis.
Clinical Professor of Diseases of Women, Medical Department, University of Minnesota.

Miss H., age 23 years; single; menses regular. Pain in left pelvis for about a year. Five months ago first noticed swelling in left side, which has gradually increased. About this time felt sick and could not work, but got to work again in a week or two. One week ago began to have fever, which has ranged from 99° to 101° F., with increased pain.

The above history was furnished me by Dr. J. Hvoslef, with the diagnosis of probable ovarian cyst.

Physical examination September 15, 1899. Patient thin, anæmic, confined to bed; pulse 100; temperature 100; chest, abdominal organs and urine normal. Extending from Douglas' sac to one inch below left twelfth rib, and lat-



RELATION OF SIGMOID TO TUMOR.

a Sigmoid. b Incision in Broad Ligament. c Outline of tumor. d Bladder.

erally from extreme left flank to two inches to the right of navel, with a decided projection in front, was a very tense, fluctuating tumor, totally immovable, and covering over the uterus, which was crowded backward and to the right. The uterus could only be outlined by rectal examination; ovaries and tubes could not be made out. Pressure produced pain.

Diagnosis.—The fluctuation, immobility, tenseness, comparatively slow growth, and the fact that it developed from one side, suggested an ovarian cyst, probably intra-ligamentary. The tenderness and temperature indicated, in addition, an inflammation of the cyst wall. This diagnosis was by no means positive, as

* Presented at the meeting of the Hennepin County Medical Society, October 9th, 1899.

the symptoms were also quite suggestive of tubercular peritonitis, septic hæmatocele, suppurating fibro-cyst of the uterus, or even an extensive pelvic abscess. The fixedness, tenseness and unusually severe pain were the especial features that indicated quite forcibly an intra-ligamentary cyst.

A median incision was therefore made, from the navel to the pubis. The tumor immediately presented. The color was, if anything, a little darker than that of an ordinary myoma. The vessels, especially the venous trunks, were much smaller (the largest being not larger than a straw), and I was struck with the fact that they did not seem to run in grooves, as is generally seen in myomata. The general direction of the vessels was longitudinal with the body.

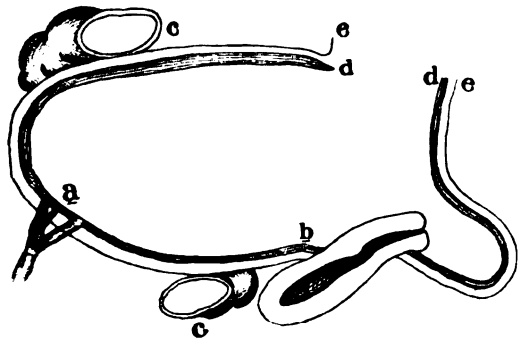


DIAGRAM OF VERTICAL SECTION OF THE TUMOR.

Open space between de and de shows line of incision through broad ligament and cyst wall. a Ovarian. b Uterine ligatures. c Sigmoid. d Wall of cyst. e Broad ligament.

The sigmoid was now seen crossing over the upper part of the tumor. The peritoneum was very much elevated at the flank and left side of the pelvis, but not in the region of the bladder. The left tube could be felt, but not seen, passing over the extreme right but under portion of the tumor. The uterus could not be reached, the tumor so covered it over.

On account of the stripping up of the peritoneum and the distortion of the parts by the growth of the tumor, the position of the ovarian and uterine arteries on either side could not even be guessed at. No part of the tumor projected through the broad ligament, which seemed much thickened.

It will be seen that only one course of procedure was available—that of enucleation, as suggested by Miner. A Tait's tube was pushed into the tumor, and a thin yellow fluid escaped. The tube, however, soon became clogged with a fibro-gelatinous greenish-yellow mass. An opening was made through the broad ligament and cyst sac, three inches long, parallel with the blood vessels, the hand introduced, and about a quart of the gelatinous mass and two quarts of fluid removed. The line of cleavage between broad ligament and true sac was not hard to find, but the enucleation was very difficult, as will be appreciated by examining the specimen.

The ovarian and uterine arteries were at last determined by the impossibility of going on with the enucleation at these points. They were then ligated between the sac and broad ligament, and the enucleation completed. These were the only ligatures required, although two clamps were placed on small branches, at the bottom of the cavity, in the pelvis. The bleeding was surprisingly small.

The broad ligament was about one-eighth of an inch thick over the tumor, and the true sac was about one-fourth inch thick. The inner surface of the sac had a deep red color and bled easily.

In removing the gelatinous mass, the hand seemed to break down extremely tenuous partitions which apparently divided the cavity into loculi, but which were nowhere as thick or solid as the thinnest membrane.

Fearing sepsis, on account of the previous temperature, the opening in the broad ligament was stitched to the peritoneum, a Mikulicz drain inserted, and the wound left open, except three stitches at the upper part.

The patient has made an uneventful recovery. Temperature and pulse never above 100° F. and 112° F., respectively, and normal after first week, by which time the gauze had been entirely removed.

The microscopic appearance would indicate the oöphoron instead of the paroöphoron as the original focus of the disease; that is to say, the outer third of the sac seems to be made up of an exaggerated but closely woven connective tissue, sparsely interspersed with poorly developed Grafian follicles. The inner third is densely infiltrated with round cells.

I was much surprised to find that the fibro-gelatinous mass was made up almost entirely of mono and polynuclear round cells, with only a very small amount of fibrinous threads.

I have detailed the symptoms and physical appearance in this case for the reason that the subject is only slightly touched upon by our best and latest authors.

WELL-PAID DOCTORS.

Not long ago a surgeon in San Francisco was paid $30,000 for performing a successful operation for appendicitis. Dr. Howard A. Kelly, of Baltimore, is said to have been paid $21,000 for an operation and twenty-one days' attention upon a mine owner's wife. Dr. Tiffany, of Baltimore, received $10,000 for a single operation; Dr. Chambers, of same city, $5,000 for operating for a stab wound; Dr. Parks, of Chicago, received $10,500 for an operation, and Dr. Burnays, of St. Louis, $5,000 for a single operation.

A PLEA FOR INTERNAL MEDICINE.

By Florence C. Baier, B. L., A. M., M. D., Owatonna, Minn.

The practice of medicine is beset with so many difficulties that the profession must reckon with patent medicines and high-handed quackery on the one hand, and on the other, with an army of negatives—homeopathy, osteopathy, faith cure, and the misnamed "Christian" science—whose fictitious claims are elaborately advertised, and in whose support, greed and self-interest so cunningly intermingle the mysterious, the scientific and the divine, as to trick the ignorant and unwary, and appal the really devout. In curious contradiction, a denial of the value of medicine flaunts itself insolently and loquaciously and persistently in the very ranks of the profession itself. This is partly due to the overgrowth of the idea tending to the diminution of heroic dosage; partly to the rapid advancement of surgery, an exact science; partly to the iconoclastic spirit of the age; and partly to the large number of half-educated people in the profession, who, not knowing what to do, do nothing, and then parade their "masterly inactivity."

To the actual employment of drugs there are many adjuvants, long recognized and used by physicians. Since when has not the regular practitioner prescribed electricity, massage, hydrotherapy, heat, cold, rest, exercise, and used "suggestion"? These are but a small part of his armamentorium. When a doctor trumpets to the world that he has found in any of these the sine qua non, he announces himself both a quack and a medical nihilist—for all else that mother nature has placed ready to our hand is as nothing to him. What would we think of the man who finds in strychnine, for instance, an universal panacea? He is not more one-sided in theory, or not more incompetent as a medical adviser, than the man who sees in electricity, or "mechanical therapy," or "suggestion," our universal physical redemption. Honesty compels the physician to admit the claims of these medical adjuncts to a place in therapeuties, but, at the same time, compels him to refuse them more than that, and to deny them the dignity of systems of medicine. The practitioner, with discriminating judgment, is not a medical skeptic, for he finds cases in which no medicines are needed, and he has the courage of his convictions to prescribe these auxiliaries, though the act may result in the loss of money, his patient, and, possibly, his reputation; yet, he may be far away from the heroic dosage and spoliative measures of earlier times—but he knows the value of internal remedies.

Medicine may be regarded as a specialized food, needed at times in the animal economy to supply deficiencies, or make up a loss, or combat an infection, and when medical journals, and when physicians themselves, advocate "throwing physic to the dogs" they argue not so much against medicine as against the ability of the practitioner.

Therapeuties is the most important study in the practice of medicine, and in therapeutics the most important thing is internal medicine. A more careful study of drugs, of their action, and of their application in disease, is the surest corrective of such stuff as the following, which was clipped from a so-called medical journal:

"Suggestive and mechanical therapy are the questions that confront the physician today. Medicines of all kinds, as remedial agents, are losing their former integrity, and aside from their suggestive powers, are of comparatively little consequence. As science and mechanical therapy increase, the use of drugs decrease."

The therapeusis of the above is as faulty as the English. To rely upon one or two or a half dozen remedial agencies, to the exclusion of all others, is to be blind to nature's own methods.

In the light of history, however discreditable in many an epoch it is to mankind at large and to the profession in particular, and in the face of present medical knowledge, it is useless to decry medicine. No one would be more dismayed at the total disappearance of drugs than the doctor who complacently informs you that the longer he practices the less medicine he gives, conveying the impression that he expects to continue his diminishing doses until they reach the vanishing point. The real fact is, however, that his experience and maturer judgment have taught him the use of, and not the abuse of, the powerful drugs at his command.

The doctor who publicly, or in his private practice, minimizes the use of drugs, and lauds the exclusive use and universal efficacy of any one remedial agent, however excellent in itself, simply and pathetically reveals his narrowing horizon, his vanishing ideals, the confusion of his thoughts, and his lack of diagnostic acumen. That drugs have done harm, and capable of it always, in unskilled hands, is no argument for their discontinuance. Like fire and water, they make "very good servants, but very poor masters."

Too many physicians have treated symptoms, without removing the cause; have treated the disease, ignoring the personal factor. Failure, under such a line of practice, was, of course, inevitable, and the disgusted practitioner, instead of finding the true cause of it in his own superficiality, has anathematized medicine in general.

We need to more closely study the physiological processes of the body, both in health and disease; to more deeply inquire into ob-

scure causes of disease—in short, to make a better diagnosis—and we shall apply the remedy with more courage and confidence. It is not true that each disease has a "specific" drug, and some forms of bodily ailment are not curable by drugs or anything else. But in the vast majority of cases, the diseased body will more rapidly and surely be stimulated and quickened to resume its natural functions under the influence of drugs properly administered than if left unassisted.

Internal medicine is a great study, continually varying with the advancement of science, and with the increasing knowledge of physiological processes. It is easier to decry its efficacy than by patient research to possess its secrets.

*OVARIAN CYST WITH TWISTED PEDUNCLE.

By A. W. Abbott, M. D., Minneapolis.
Clinical Professor of Diseases of Women, University of Minnesota.

Mrs. D., 25 years of age, was delivered of her first child on July 27, 1899. The labor was normal. About the first of September she felt some pain in the left pelvis, which gradually increased until now, October 2nd, it is so severe that she gets very little rest. These pains radiate from the left ovarian region towards the back and left kidney. For a week she has not been able to lie down on account of a drawing pain in the hypogastric region. She first noticed a swelling in the left pelvis, about two weeks after the pain began, which has rapidly increased, so that now she measures forty-two inches at the navel. She never regained her normal size after confinement, but was told that no tumor existed. This was probably an error in diagnosis, but the tumor may have been so small that detection was impossible. She had nausea and vomiting when she first felt the pain, but this soon ceased, although her appetite has remained very poor. She urinates frequently, but without pain, except an annoying pulling sensation just as the bladder empties. She has lost flesh. Her temperature is 99 F. and pulse 98 to 108. The uterus is in normal position. The right ovary can be made out and seems normal. The tumor is very prominent, dull with colon resonance above and on the sides, thinly fluctuating, and very tender.

Diagnosis.—Ovarian mono-cyst of left side, with probable adhesions in region of bladder, with possible hæmorrhage in the tumor.

Abdomen opened October 5th. The pearly color of an ovarian cyst was manifest, but it had a greenish brown appearance, as if there was a subjacent hæmorrhage. On inserting the Tait tube, about a gallon of thin coffee-colored fluid flowed out, indicating a previous slight bleeding into the cyst. The only adhesion was one recent attachment of the tumor to the abdominal wall, three inches below the navel and had evidently begun as an adhesion to the fundus of the bladder, as that organ was drawn up by the growth of the tumor and lay between the adhesion and subperitoneal fat with no intervening peritoneum; i. e., the bladder was pulled up by the adherent growing tumor, and drew up the peritoneum with it. There could, of course, be no more twisting after the adhesion took place, and from its position the stripping of the peritoneum must have followed, and the tumor must have grown largely after the twisting had ceased and adhesion taken place—all of which goes to prove that the tumor was small immediately after confinement, and to explain why her accoucheur did not find it.

On relieving the adhesion and drawing out the sac, the pedicle was found firmly twisted two full turns to the right. The fallopian tube of the same side was included in the twist, which gave it the appearance of the tumor having rotated three times instead of twice. The arterial circulation of the sac was not much impaired, but veins were very full, large, and contained solidified blood. The fimbriated end of the tube was swollen, red and very cellunatous. the tube was swollen, red and very oedematous. The tumor seems to be an oöphoritic cyst, as the tube is not stretched over it, nor is the ovary found upon it.

The status and development of this tumor are very easy to trace when we take the symptoms and operative findings together. The tumor existed before confinement, was small and flacid immediately after. It then began to grow and rotate. It rotated slowly and brought on vomiting for a short time only and some pain. After it had rotated twice, it became attached to the fundus of the bladder. It then grew rapidly and gave her pain when she extended the body by the pressure of the abdominal muscles, and caused the frequent micturition by stretching the bladder.

According to Bland Sutton, the following facts are about all that is definitely known of the axial rotation of pelvic tumors:

1. It may occur in any form of pediculated pelvic tumor.

2. It is most common in Dermoid's ovarian and parovarian cysts.

3. It occurs in about ten per cent of ovarian and parovarian tumors and in these twenty-five per cent are associated with pregnancy.

4. No satisfactory explanation of the cause of rotation has been offered.

5. The amount of torsion may be only half a turn and twelve complete turns have been reported.

* Presented at the meeting of the Hennepin County Medical Society, October 9, 1899.

6. The rotation may be in either direction, but in a small majority it is toward the median line.

7. Rapid and firm twisting in a small tumor may lead to an error in diagnosis, as the agonizing pain, nausea and collapse, together with tenderness, are almost identical with the symptoms of ruptured tubal pregnancy.

8. Slow torsion is accompanied by more moderate pains, rapid increase in size of tumor but without collapse or much nausea.

In this specimen can be well seen the livid color and thickening due to the apparent hæmorrhage into the sac wall. There also seems to be a number of large muscular bundles, but which, on section prove to be large veins with thickened walls, containing coagula and surrounded by areas of increased connective tissue in their immediate vicinity. The whole wall takes a stain very poorly but best on the peritoneal side.

The remarkably certain and easy recovery attending operations on these cases goes to prove the truth of another observation by Sutton, that what is called gangrene is a loss of vitality but without odor or the presence of putrefactive germs. The lividity and the greenish color is due to the coagulation of blood. The condition is entirely different from that in a strangulated gut, the lumen of which is the natural habitat of putrefactive organisms.

*OBSTRUCTIVE GROWTHS OF THE PYLORUS, WITH REPORT OF A SUCCESSFUL CASE OF PYLORECTOMY.

By J. E. Allaben, M. D., Surgeon to St. Anthony Hospital, Rockford, Illinois.

Growths that may cause obstruction of the pyloric orifice of the stomach are: Carcinoma, simple hypertrophic stenosis, cicatricial growths from ulcers produced by swallowing corrosive drugs, simple hypertrophy of the coats of the stomach at the pylorus, especially of the fibrous and muscular coats, mucous polypi, and rarely sarcomata, fibromata, myomata, lipomata and cysts. All of these, excepting carcinoma and cicatricial contractions, are so seldom met with that they need not command attention only to speak of them in this paper. But cancer of the stomach and of other organs is of such frequent occurrence and apparently so much on the increase that it should command our most earnest consideration.

In England and Wales during ten years (1860–1870) 81,699 died of carcinoma, a ratio of 1.29 (Senn). In New York the death rate from cancer has increased in twenty years from 1.82 per cent. to 2.17 per cent. (Bryant). Heberlin states that in Switzerland gastric cancer is on the increase, being for 1,000 inhabitants in 1877 0.61 per cent. and in 1886 0.99 per cent. In England the death rate from cancer is about four times as great as it was fifty years ago. .The mortality from gastric cancer is estimated from 0.6 per cent. to 3½ per cent. In New York, in all cases of death, 1 in 100 is due to cancer of the stomach (Welch). In gastric cancer the pyloric region is involved in 60.8 per cent. of the cases. The cylindrical celled, or adenocarcinoma, is the form of cancer most frequently found in the stomach.

The law regarding the prognosis of operation for cancer in general is especially applicable to cancer of the pylorus. The earlier the operation the better will be the results. To obtain more favorable results two things are imperative: first, the perfection of methods of diagnosis; and, second, the education of the public to understand the necessity of operating as soon as a diagnosis is made. Chronic stomach trouble in patients above forty years should be thoroughly studied with a view of detecting malignancy.

Treatment of obstruction of the pylorus is limited to surgical procedure. The operations for relieving obstruction are:

1. Gastro-enterostomy, which is only a palliative measure.

2. Digital divulsion of the pylorus, or Loreta's operation.

3. Pyloroplasty.

4. Pylorectomy or resection of the pylorus, of which there are three types: (a) typical, total or circular pylorectomy; (b) atypical pylorectomy, which consists of a combination of pylorectomy with gastro-enterostomy; and (c) partial pylorectomy.

The first pylorectomy was done by Peán in 1879. One was performed by Rydygier in 1880, both cases dying. Billroth performed the first successful pylorectomy in January, 1881. The earlier operations for pylorectomy were attended with a great mortality. According to Senn, in sixty-six cases collected from statistics fifty died; other authorities give the mortality as 57.4 per cent. to 75 per cent., but we believe that in the near future this mortality rate will be greatly reduced. Already we see an improvement in this direction. From 1881 to 1885 the mortality was 61.4 per cent.; from 1886 to 1892 it was 34.3 per cent. In 1882, of thirteen cases of resection for carcinoma, all died; in 1893, of eight cases, all lived. Regarding remote results, the tables of Haberkant show that the cases recovering from the immediate results died afterward from one and one-half months to eight years. At first thought, these statistics would not seem very favorable; but the remote results of operations of the breast for

*Original abstract of paper read before the Surgical Section at the meeting of the Mississippi Valley Medical Association, held in Chicago, October 3-6, 1899.

carcinoma are but little better. The average prolongation of life of those operated upon for cancer of the breast is from seven months to one year and nine months. Yet we do not hesitate to recommend the operation for it is the only hope of prolonging life. When we consider that it is only since the period of aseptic and antiseptic surgery that the abdominal cavity could be safely invaded; that the stomach is a vital organ in a comparatively inaccessible region, and that the operation is usually postponed until the patient is exhausted from the effects of obstruction, the wonder is, not that pylorectomy at the present time is a very fatal operation, but that it could be attended with success at all.

DIAGNOSIS.

Besides the usual symptoms of gastric disorder, emaciation, vomiting of food and matter resembling coffee-grounds, absence of free hydrochloric acid and the presence of lactic acid in the gastric juice, the stomach when empty should be washed out, as suggested by Hemmeter, with normal saline solution, using a rubber stomach tube with a sharp chisel-shaped point around the lower opening to dislodge surface particles for microscopical examination. As cancer cells do not multiply by direct division (fission), but by indirect division (Karyokinesis), the presence of cells, undergoing this indirect division in the detritus of stomach washings, should suggest the presence of malignancy, even if the characteristic cancer cells are not found.

REPORT OF A CASE OF PYLORECTOMY.

The patient was a female aged 28 years, mother of two children; family history negative. Was seen first June 10th, 1897, giving a history of ten months of intermittent pain, gastric disorder, loss of flesh, but not cachetic, with tumor in right hypochondriac region; the tumor finally becoming adherent under the umbilicus, and was the size, shape and hardness of a kidney. Exploratory incision was made September 1st, 1897, followed by total extirpation of one-third of the pyloric end of the stomach as follows: Incision four inches long, along outer border of right rectus muscle, the middle of the incision being opposite the umbilicus. Greater and lesser omentum cut off between two rows of strong cat-gut ligatures. Duodenum was clamped and severed, and stomach amputated a little beyond the region of the neoplasm. The stomach was closed from above downward to within one inch of the lower angle by,

1st. Running Lembert suture of strong silk in the mucous membrane;

2nd. Running Lembert suture of formalized cat-gut in serus and muscular coats;

3rd. Running Lembert suture of fine cat-gut over all embracing serous coat only.

The duodenum was united to the lower angle of the stomach with a Murphy button. The patient recovered rapidly from the operation, leaving the hospital on the fourteenth day, and continued well for nearly two months, when she suddenly developed peritonitis. Celiotomy was performed five days later—two quarts of fluid and pus evacuated, but the patient died two days later from exhaustion. The post-mortem revealed two strictures in the transverse colon, the Murphy button having lodged at the first stricture, causing a perforation of the intestine. The union of the stomach coats and of the duodenum to the stomach was perfect. Microscopical examination of the tumor and stricture showed them to be carcinomatous.

CONCLUSIONS.

1. Cancer is one of the most potent factors in the causation of death, with a tendency to constantly increase in frequency of occurrence.

2. Gastric cancer occurs in about one-fifth of all primary cases.

3. In gastric cancer the pyloric region is affected in sixty per cent. of the cases.

4. The treatment of gastric cancer, directed toward a permanent cure, is in the present state of our knowledge limited wholly to surgical methods.

5. As early total extirpation of malignant growths, with the hope of permanent cure, is the goal toward which we are constantly striving, and, as these growths in gastric cancer occur at the pyloric region in sixty per cent. of the cases, it would seem to follow as a natural conclusion that pylorectomy would be the treatment most frequently prescribed for the cure of this malady.

6. Inasmuch as early diagnosis is the greatest requisite for directing proper radical treatment, the internist and the surgeon should turn their best efforts in this direction.

7. If the operation of pylorectomy were performed before obstructive symptoms manifest themselves, and before the occurrence of metastasis, the immediate results would be as favorable as in any other abdominal work, and the remote results as good as in extirpation of the breast for carcinoma.

CARE OF THE MOUTH.

Two drops of camphor on your tooth-brush will give your mouth the freshest, cleanest feeling imaginable, will make your gums rosy and absolutely prevent anything like cold sores or affections of your tongue. The gums, by the way, are barometers of our condition. If they are clear, bright and red we are in good health, while if our blood is thin and wanting in the mysterious red corpuscles that make us healthy the gums will be pale pink, or if we are in a very bad way indeed, and much in need of a course of dialized iron, they will be almost white.—Indian Lancet.

*FURTHER OBSERVATIONS ON THE TREATMENT OF THE ABDOMINAL VISCERA THROUGH THE COLON.

By Fenton B. Turck, M. D., Chicago, Ill.

In a previous communication it was shown that small quantities of hot water (55 degrees Centigrade) introduced into the rectum produced a marked effect on the heart and general circulation and especially on the abdominal organs. From these results it was evident that hot water introduced, at the temperature mentioned, into the colon, had a greatly beneficial effect upon the abdominal viscera. Air, hot or cold, forced through a double tube into the colon and allowed to escape, also acts not only as a powerful stimulant to the abdominal viscera, but also acts as a species of pneumatic gymnastics of the colon. In the introduction of hot water into the colon, the following technique is adopted: The patient is placed in a dorsal position upon a table specially devised for the purpose, which is so adjusted that the hips may be raised or lowered to any desired angle without discomfort. The solution employed is usually a 9 per cent normal salt solution when therapeutic effect of heat and cold are desired. For other purposes, mild antiseptic and medicated solutions may be employed. A soft rubber tube, either single or double, with end and side openings, is introduced into the rectum as far as the sigmoid flexure. At first 200 to 300 cubic centimetres of water at a temperature of 50 degrees Centigrade is introduced. This is allowed to return through a tube into a conveniently placed receptacle and the procedure repeated. Every time the water is introduced its temperature is gradually raised until it reaches 55 degrees Centigrade; in all, from three to six litres are needed. The patient is then allowed to evacuate the bowels, after which he receives similar short treatment with water cooled 2 or 5 degrees Centigrade. The amount of water introduced and withdrawn and the duration of the treatment depends upon the character of the case.

For continuous irrigation, my double recurrent tube or needle douche has answered the purpose best in the hands of gastro-enterologists like Herschell, Treves, Gillespie and others. By continuous irrigation a somewhat different action is obtainable from that already referred to. It is indicated in impaction, acute gastro-enteritis and during the early stages of appendicitis. A strict observance of technique, judiciously varied in each case, gives the best results.

The mucous membrane of the colon, like that of the throat, seems to be insensible to comparatively high temperature. The sensations within the colon as to heat or cold are not very definite. This may in part be due to the fact that the colon sensation has been so specialized as to faecal pressure as to lose its heat and cold reaction. That the treatment through the colon influences not only the general circulation, but also stimulates the nerve actions of the abdominal viscera, and prevents the cerebral and spinal blood pressure, has long been known. The principle on which stimulant enemata have been employed in opium coma and allied conditions is significant evidence of this. The ano-genital center is notoriously the last to be affected in coma. Numerous instances have been reported where death from opium coma and anaesthesia have been prevented by its stimulation. Furthermore, stimulation of the ganglia in the walls of the intestines cannot fail to produce effect on the spinal and cerebral centers. The increased action of kidneys, liver and other organs after the employment of colonic means is evidence in this direction. This is furthermore shown by the fact that favorable results depend not upon the amount of water introduced, but upon the reaction between that and cold. Large quantities of water introduced at one time are detrimental. Small quantities, frequently repeated, have markedly beneficial effects.

In colonic treatment by water or air, single or double recurrent tubes may be employed according to the nature of the case. A tube with a single opening at the end is useless, however, for colonic lavage. One designed by me consists of a rubber tube (one metre long and with a calibre of 23 A or 35 F), tapered at the end to an opening with beveled edges. On either side are four small perforations opposite to each other in a row. Above this is a large side opening with edges so sunken as to prevent irritation in introducing the tube. The distance from the end of the tube to the uppermost opening is one and three-quarter inches. This tube ensures rapid return of the water injected and there is no danger of the suction of mucous membrane by siphonage. There is thus less danger of traumatism and of closure of the end of the tube by the mucous membrane or faeces. This tube ensures a more equable distribution of the fluid introduced, and is, therefore, of special value in topical applications, or in introduction of food. The double recurrent tube or "needle douche" previously described will be found of special value when prolonged irrigation of lavage is desired. It has been found particularly useful in obstruction from whatever cause by Herschell and others. For the same reason it is of value in colon atony or where hot or cold water is needed as a spray or needle douche. In some cases a tube capable of passing the sigmoid flexure may be needed. Most tubes now made

* Read at the meeting of the Mississippi Valley Medical Association in Chicago, October, 1899.

pass only to this flexure, but not beyond. The stiff tubes press upon and so bulge the walls as to give the false impression that the tube has passed through the flexure. The flexible tubes coil up and produce the same impression. My colonic sound and irrigator enables the physician to pass around the colon even as far as the caecum. It consists of a double curved metallic tube about sixteen inches in length, so made as to be passed through the sigmoid flexure. The tube not only serves as a channel for the return of fluids injected, but also as a sheath for the introduction of a flexible hollow metallic cable. The distal end of the cable is surmounted by an olive shaped perforated head. This serves as a guide for passing the sound. As the cable is hollow, it may be employed for colonic distention. This, if secured during the passage of the sound, will ensure further introduction. The position of the cable tip may be determined by palpation, especially if the cable be rotated. Since the cable is metallic, it can be employed as an electrode. Food, by this instrument, may be distributed over a wide area. Great objection frequently exists to the introduction of water, especially hot water, into the colon. The hot water produces depression and even collapse at times. Warm water is particularly objectionable in this particular. Atony of the bowels from this cause, moreover, is very frequent. Distention of the bowels with water, subsequently withdrawn, would be of value in bowel gymnastics, were it not for the fact that, since the water is slow to return and is not compressible, it causes undue distention.

In treatment of the colon the object is, first, when atony exists, to secure heat; second, distention; third, contraction and peristalsis producing gymnastic exercise. For these purposes air often answers better than water. If heat be desired, the air can be heated by passing it from a compressed air tank through a bottle of water heated to the required temperature before passing it into the colon. The method of treatment is useful in atony of the bowels, whether it exists alone or with obstruction or impaction. Compressed air is used with a double tube introduced into the colon. When the colon is distended, air is allowed to escape through the outlet tube. Air at 55 degrees Centigrade reaches as far as the colon. Nebulization of the colon may be employed; any of the nebulizing mixtures adapted to the colon being used.

FOR FLATULENCE IN CHILDREN.

R. Sodii sulphocarb.....grs. 4 to 8
Syr. aurantii.....m. 40
Aq. menthæ pip.....q. s. ad oz. 1

M. Sig.—One teaspoonful three times a day for two days.

* REPORT OF SIXTY-ONE CASES OF APPENDICITIS, THIRTY OF WHOM WERE OPERATED UPON, AND REPORTED IN DETAIL.

By F. T. Meriwether, M. D., Asheville, N. C.

While these cases are not large in number, they present features illustrative of the general characteristics of the disease. Thirty-one cases were treated medically, most of them being in consultation, in all of which he advised operation, and, of the thirty-one, four died, a mortality rate of 13 per cent, and, if these cases are all traced, no doubt the mortality would be greater. Of the operated cases, thirty in number, three died, a mortality of 10 per cent. But of those lost after operation, not by operation, as is so often said, none can by any means attribute the fatality to the operation. In one case, the patient had been treated by a practitioner for five days after general peritonitis had developed, and the operation was only done as a last resort; in another, the mother refused operation until the father could reach Asheville, and so his chances were thrown away, he having general peritonitis; and, in the third, death was caused by neglect of the neighboring negroes. They would not feed him or in any way take care of him. All three of these cases would in all probability have died for, in all of them, general peritonitis was present. All of the cases in whom a peritonitis was present, when medically treated, died. The probability is that all of such cases will die unless operated upon, and most of them will die even if operated upon, but it is the duty of the surgeon to offer the patient his only chance for life, even though the cause of surgery be damaged. We have all seen cases, not only of appendicitis, but of other serious diseases—for instance, rupture of the bladder, in which we could offer no real hope, and yet in which the patient recovered. In two of the cases reported, no hope was offered to the family, but they were told it was their only possible chance, and, the family accepting, operation was done and the patients both go well.

In ten cases concretions were found, in one of which the concretion was of a thick mucoid material, and in four there was only a single concretion. Except in the case of the mucoid mass, all of the concretions were composed of fecal matter, though in two a small amount of vegetable fibre was found imbedded in the mass. In one case the concretion was the exact shape and size of a cherry seed and it was only after division and examination that its real nature was discovered.

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* Original abstract of a paper read at the meeting of the Mississippi Valley Medical Association, held in Chicago, October 3 to 6, 1899.

In only one case was vomiting marked, while in five cases there was no vomiting. In eight cases the bowels were loose, six of these being gangrenous cases. This looseness of the bowels was in nearly all the cases due, he thinks, to the giving of cathartics before and during the attacks, which looseness helped not a little to make the operation a success. Liver dulness was lost in all the pus cases, eight in number, and also in one case where pus was not present. In one of the cases the pus was thoroughly walled off. Sixteen of the cases were females, fourteen males. The average age was 23 2-5 years; there being sixteen cases 21 years old and under, twenty-four cases 30 years of age and under, twelve cases between 21 and 40 years of age and two over 40 years of age. The youngest case was 5 and the oldest 55 years old.

In only ten cases could the appendix be felt before the operation, and in these cases the position and conditions determined by palpation were verified by the operation. Whether this inability to palpate the appendix was due to a lack of skill or not, he does not know, but he thinks in many cases nothing but an indefinite resistance can be felt, particularly when the appendix points southwardly or lies outside the caecum. The rigidity of the oblique muscles and the distension of the caecum makes it nearly impossible to feel the appendix. One can often approximate the position of the appendix by the lines of resistance felt, but he doubts if in all cases an absolute diagnosis can be made of the conditions present.

An interesting feature about one of the cases reported was that, though there was no pus present, and only a small amount of serum, the infection was so virulent that the operator was infected upon the hand and was disabled for ten days. Within an hour after the operation a burning was noticed at one of the hair follicles upon the little finger and in eighteen hours a vesicle had formed. Septic chills were had with quite a high temperature. Cultures from the vesicle showed the presence of the streptococci pyogenes, staphyllococci pyogenes aureus and one colony of the colon bacillus. A very minute perforation was present near the tip of the appendix. In another case, a very persistent cough, which the patient said was synchronous with the recurrences of the appendicular trouble, was relieved. In a third case, one who had a history of typhoid fever occurring the year previous, the adhesions found at the time of the operation convince me that it must have been an appendicular trouble, for he had had no illness other than the supposed fever. In many cases the appendix looked apparently normal, possibly only congested, but a thorough examination of its calibre and a microscopial examination of its walls always revealed disease.

In all the cases the McBurney incision was used and in no case was difficulty had in reaching the site of the trouble. Through and through suturing was used in a great many of the cases, but at present he prefers layer suturing with the sub-cuticular suture for the skin, all of catgut. In most of the cases the appendix was inverted and buried.

He does not always advocate the operation necessarily to save life, but in many cases to prevent suffering and loss of time from business. Many cases will get over their attacks, but, when we consider the low mortality of the interval operation and the high mortality of the delayed operation, the uncertainty of the exact condition of the appendix, or the outcome of the next attack, he thinks we are justified in advising early operation in every case.

A TYPICAL CASE OF VACCINELLA.

The illustrations herewith are from the Medical Record, September 23, reported by Dr. W. E. Fowler, of Huntsville, Texas.

A Typical Case of Vaccinella.

The patient is a negro, age 30, came to hospital March 19, 1899, suffering with tertiary syphilis, but with no well-marked centres of attack. The subject had been vaccinated two weeks before and had a well-developed ulcer on the deltoid muscle of the left arm. In a few days a number of vesicles appeared about

the primary sore, and the next day numerous papulæ were observed about the neck, and from these they rapidly spread over the body. The vesicles were transformed into pitted pustules, similar to small-pox, and they had the characteristic odor. All the symptoms were those of small-pox, with the single exception of the absence of pyrexia, there being absolutely no elevation of the temperature, save on two occasions, and it did not exceed 100° F. The photograph was taken April 24th, a few days after the appearance of active desquamation. The treatment was merely of a calmative and antiseptic nature, and the patient was soon measurably well, but is still under the specific treatment for the syphilis.

The author comments as follows: "Now, it is a very well-known fact that one of the direct effects of vaccinal lymph in the system is to aggravate any cutaneous diseases present; this I know personally to be true, as it is clearly demonstrated in the cases of patients now under treatment here (at the penitentiary); and as many of the most marked manifestations of syphilis are of a cutaneous character, I have associated the progress of my case with that disease."

XIPHOPAGES, OR HUMAN DOUBLES.

(Scientific American.)

The first living double monster that we know much about was described by Isidore Geoffroy Saint-Hilaire, and consisted of the twin sisters Helene and Judith, who were born in Hungary in 1701 and died in 1723. The Siamese twins, Chang and Eng, attracted much attention in their time and were exhibited in Europe and America. They were born in 1817, were married and had children, and died at an advanced age. These two brothers were connected by means of a ligamentous band passing from the epigastrium of one to that of the other. Later on, the two sisters, Millie and Christine, who were born in Columbia County, South Carolina, in 1851, were exhibited in Europe. These twins were connected by the back. Recently, there have been presented to the Academy of Medicine of Rio Janeiro, Brazil, two sisters connected with each other in front and thus belonging to the category of what are now called Xiphopages. By this term are designated two well developed individuals with one umbilicus in common and connected from the lower extremity of the sternum to the navel. Such double monsters are curious. There are some that are provided with a thoracic cavity proper to each individual. These are genuine Xiphopages. In others, the independence of the thorax is limited to the upper part of the thoracic cavity. M. Marcel Baudoin, who has made a special study of such monsters, designates these latter by the name of Thoracopages.

The true Xiphopages are rare in science. In fact, the number of those born living and that have been observed does not appear to exceed seven or eight, and several of these have not lived longer than a few days, or even a few hours.

In 1892 there were exhibited in Europe the two sisters, Rodica and Doodica (Fig. 1), who were born in the English Indias in 1889. They were three years and some months old when they were exhibited in Brussels.

In Fig. 2 are shown the two sisters, Rosalina and Maria, who have just been discovered in Brazil. These two girls are ten years of age and were born at Cachaeiro de Itapemerim. The parents were anxious to know whether or not they could be separated. That all depends upon the nature of the junction. Three Xipho-

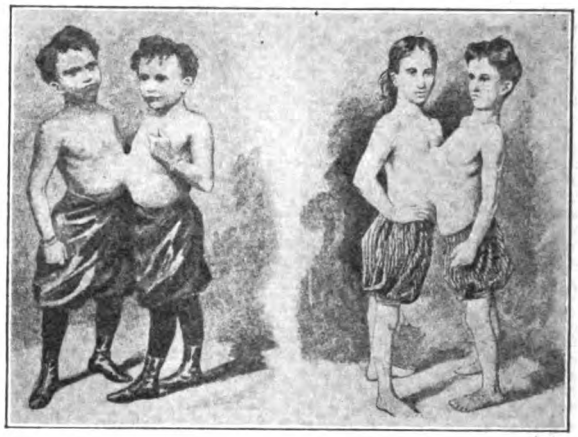

Fig. 1. The Sisters Rodica and Doodica.

Fig. 2. The Sisters Rosalina and Maria.

pages have already been operated upon, two of them with success, and all were of the female sex.

With radiography, it will be easy to ascertain whether the two bodies are absolutely consolidated or whether they are independent. If the latter is the case, a surgical operation might be performed with a considerable chance of success.

For the above particulars and the illustrations, we are indebted to La Nature.

The Journal of the American Medical Association has the following to say in regard to one pair of the above twins: An unsuccessful attempt has been made to separate the six-year-old "Rosalina and Maria Sisters." Repeated examinations in medical circles had convinced every one that the twins were distinct and could easily be separated. Radiographs, after ingestion of bismuth, enabled the entire alimentary canal to be traced in each as in a normal subject, while the connecting band cast no shadow. But the incision revealed a peritoneum in common and a single continuous liver, forming a flattened lobe 4 cm. thick and 10 cm. wide occupying the second upper quarter of the connecting band. There were no indications of a septum of any kind, and intervention by operation was abandoned. In other respects the organs of each were found apparently independent. The twins move around easily, one walking backward, but can only lie on one side with comfort.

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NOVEMBER, 1899.

THE PROPOSED MINNESOTA NATIONAL PARK.

We have long held the belief that for tubercular patients and those suffering from neurasthenia, no climate or location surpasses the pine forests of our own state. Time and again has the writer sent young men showing signs of incipient phthisis to the lumber camps, some to earn their livelihood as time-keepers, others to pass the time in hunting and roughing it in the forest, and in every case with marked benefit.

But the pine forests are disappearing and unless something is done to save them the "murmuring pines" will soon be among the things of the past, for in the past fifty years $100,000,000 worth of pine has been cut in Minnesota alone, and the value of the standing pine which is cut down each year amounts to $5,000,000. The greater part of the pine which remains is in the hands of private parties, many of whom live in other states, who will cut it as fast as they can sell it.

Much credit is due Col. John S. Cooper, of Chicago, Gen. C. C. Andrews, of St. Paul, and other gentlemen, for their efforts to preserve a large tract of primeval pine forest as a National park. Already the state of Minnesota owns the Itasca park, of less than a township at the source of the Mississippi river, but it is twenty-five miles from a railway and too small to answer the purposes of a health resort and a covert for game. To this it is proposed to add the Indian reservations of Cass lake, created in 1855, Leech lake and Winnebigoshish, comprising in all 611,592 acres of land and 218,470 acres of water surface.

The project has been under consideration for three or four years, but has met with considerable opposition owing to the large area asked for. The requirements being now reduced to reasonable bounds there is every probability that the scheme will be carried to a successful issue.

The soil is dry and sandy; the landscape can hardly be surpassed for beauty. Here are lakes dotted with islands and these covered with magnificent groves of Norway and white pine, whose branchless trunks rise to an immense height, filling the air with a delicious aroma and allowing the sunlight to fall upon grass-covered glades, over which a carriage and pair could be driven with ease in any direction.

Black bass, pike, pickerel and muskallonge are caught in the lakes; wild ducks and geese abound; and game both large and small roam through the forest. Here is a veritable sportsman's paradise, but, better than that, it is a natural sanatorium for the cure of the neurasthenic, the overworked and the tuberculous.

It was our privilege a few weeks ago to visit this delightful region, and as we lay in a tent and inhaled the delicious air laden with the odor of the pine cones, the words of the song came to remembrance:

"I knew by the smoke that so gracefully curl'd
Above the green trees that some cottage was near,
And I thought if there's peace to be found in the world,
A heart that is humble might look for it here."

THE CAUSE OF YELLOW FEVER.

Before the war with Spain, or, to be more exact, on September 11, 1897, Surgeon—then Past-Assistant Surgeon—Eugene Wasdin, began his researches into the cause of yellow fever. Dr. Wasdin had made the first diagnosis of yellow fever at Ocean Springs, Miss., contracted the disease himself, and on his recovery was directed by an order from the president to make an investigation into the cause of yellow fever as indicated by Sanarelli. He was furnished with a bacteriological outfit for the purpose, and on October 4th of the same year, was ordered to New Orleans, where the

opportunities for observation were greater than at Ocean Springs. On the 6th of October, Past-Assistant Surgeon H. D. Geddings was ordered to New Orleans for the same purpose, the two investigators being directed to work together, or independently, as might be agreed between them.

On the 1st of November they reported that they had carried their investigations to a point where it was desirable to continue them in some more favorable locality, and accordingly they were detailed for duty in Havana. They established their laboratory in the Cuban capital in December, 1897, and continued their investigations until March, 1898, when the threatened war with Spain caused their return to the United States. In the following November they returned to Havana and took up the thread of their investigation where they had dropped it before the war. In June of the present year, having arrived at definite conclusions they returned to Washington and reported to the bureau the following conclusions:

First. That the micro-organism discovered by Prof. Guiseppe Sanarelli, of the University of Bologna, Italy, and by him named "bacillus icteroides," is the cause of yellow fever.

Second. That yellow fever is naturally infectious to certain animals, the degree varying with the species; that in some of the rodents local infection is very quickly followed by blood infection, and that, while in dogs and rabbits there is no evidence of this subsequent invasion of the blood, monkeys react to the infection the same as man.

Third. That infection takes place by way of the respiratory tract, the primary colonization in this tract giving rise to the earlier manifestations of the disease.

Fourth. That in many cases of the disease, probably a majority, the primary infection or colonization in the lungs is followed by a "secondary infection," or a secondary colonization of this organism in the blood of the patient. This secondary infection may be complicated by the coinstantaneous passage of other organisms into the blood, or this complication may arise during the last hours of life.

Fifth. There is no evidence to support the theory advanced by Professor Sanarelli that this disease is primarily a septicæmia, inasmuch as cases do occur in which the bacillus intestinal contents of normal animals and of organs in which it might be deposited therefrom.

Sixth. That there exists no causal relationship between the bacillus "X" of Sternberg and this highly infectious disease; and that this bacillus, "X," is frequently found in the intestinal content of normal animals and of man, as well as in the urine and the bronchial secretion.

Seventh. That, so far as your commission is aware, the bacillus icteroides has never been found in any body other than of one infected with yellow fever; and that whatever may be the cultural similarities between this and other micro-organisms, is characterized by a specificity which is distinctive.

Eighth. That the bacillus icteroides is very susceptible to the influences injurious to bacterial life, and that its ready control by the processes of disinfection, chemical and mechanical, is assured.

Ninth. That the bacillus icteroides produces *in vitro* as well as *in vita* a toxin of the most marked potency; and that, from our present knowledge, there exists a reasonable possibility of the ultimate production of an antiserum more potent than that of Professor Sanarelli.

TRUE DIGNITY.

True dignity must stand completely free
Of haughtiness, for that is but a mask
Oft worn to simulate the truly great,
And hide a mind of smallest calibre.

LYMAN W. DENTON, M. D.,
Minneapolis.

ACTION OF DIPHTHERIA POISON ON THE HEART.

Dr. F. Rolly, first assistant to the children's clinic at Heidelberg, as the result of a series of experiments on animals with the diphtheria toxine ("Archiv fur experimentelle Pathologie u. Pharmakologie," 42, 1899) concludes that:

(1) The fall in blood pressure induced by the poison of diphtheria is due to paralysis of the vasomotor centre, and also to the paralysis of the heart, which in spite of artificial respiration soon ceases to beat.

(2) This action on the heart is direct and in warm-blooded animals is independent of the nervous system.

(3) The paralysis of the heart develops after a more or less definite latent period. Direct injection of the diphtherial poison or transfusion of lethal diphtherial blood interferes with the action of the isolated normal rabbit's heart only after a certain latent period.

(4) On the other hand, the action of the poison takes place at the same time, even if, before the appearance of poisonous symptoms or at the beginning of such toxic action, the heart is washed out with normal blood.

(5) This property possessed by the diphtheria poison of action on the heart leads to the opinion that the poison gradually takes hold of the heart muscles, and is seemingly stored up there until its complete action is manifest; this further explains the continuance of functional heart disturbances after many of the acute infections.

Communications.

REGARDING THE SPECIFIC GRAVITY OF THE VAPOR OF SULPHURIC ETHER.

Charleston, S. C., Oct. 9, 1899.

To the Editor of the Medical Dial:

Dear Sir: I have been absent from home since August 1st, and on my return found a sample copy of your journal awaiting me. Among much that was excellent I found in the article by Dr. Staples on "Certain Landmarks in the Progress of Modern Medicine" the following statement, which is certainly contrary to all authority, and is dangerously misleading. Perhaps you may have corrected it in the subsequent number, but at any rate it will do no harm to call your attention to it again. See page 249, August: "Sulphuric ether is a light liquid, evaporates rapidly in ordinary room temperatures, mingles readily with the air, and, being of less specific gravity, quickly rises in the atmosphere when allowed to evaporate." Against this read in Fowne's Chemistry: "Although the substance itself is one of the lightest of liquids, its vapor is very heavy, having a density of 2,586, referred to the air." Also notice the well-recognized rule for anæsthesia (ether or chloroform), to keep the light elevated in case of operating at night, by gas or other open light.

This is a mistake that is not unlikely to occur from the lightness of ether liquid, and too much care cannot be taken to prevent students making it.

Hoping you will excuse any appearance of desiring to criticise on my part, I am

Yours sincerely,

JOHN FORREST, M. D.

Professor of Materia Medica and Therapeutics, Medical College, State of South Carolina.

DR. STAPLES' REPLY.

In answer to the criticism of Professor Forrest, Dr. Staples writes a word as follows:

In reviewing the matter it appears that there is some reason for objection to a single point or expression in my mention concerning the physical and chemical properties of the vapor of sulphuric ether, relating especially to its specific gravity compared with that of air. In admitting, however, the propriety of this correction, I wish to emphasize the fact, which, in my writing concerning the use of ether and chloroform, I had principally in mind, viz., that the vapor of ether unites very readily with the air, and is quickly diffused in all directions. The fact that this vapor may of itself have a greater specific gravity than the air, does not prove that in combination with the latter it is not found in the upper part of the room as well as in the lower. My object in the writing referred to was mainly to show the importance of different management in the use of different anæsthetics; that in the use of ether the inhaler and its application should be such as not to allow its free escape into the air. Aside from the reason of its better effect as an anæsthetic when thus administered, it is evident that such procedure has another importance in preventing, if possible, the charging of the air with the ether vapor sufficiently to render the combination explosive. This, together with an avoidance of confined air in the operating room, may at least equal in importance the plan of elevating the lights.

Respectfully,

FRANKLIN STAPLES, M. D.

Winona, Minn.

NOTES FROM THE HUB BY THE ASSOCIATE EDITOR.

Boston, Mass., October 16, 1899.

To the Editor of the Medical Dial:

I send you herewith a few lines, a brief history of my movements since arriving in Boston. I made one visit to the City Hospital, September 30, and was cordially received by the superintendent, Dr. Rowe, and others of the hospital staff, and shown some interesting cases in one of the surgical wards for children. One young lad, by an accident, had his skull so completely crushed that the two parts were quite movable; but his head was relieved by trephining, and the removal of a considerable quantity of the fluid. The little fellow was up and around the ward apparently nearly recovered. Another child, run over by a wagon, had a bad fracture of the lower jaw and some displacement of other bones of the face, but he too was recovering. There were several others of more or less severity, but doing well.

I was just in time to see an operation for appendicitis by one of the surgeons, Dr. Lund. The case was a young woman about twenty years of age. After cutting through the peritoneum, the operated parts were thoroughly walled off by the insertion of sterilized gauze, and on opening the abscess, a large quantity of pus was discharged. The appendix, though considerably decayed, was found and removed in several pieces. It appeared as a whole, longer than usually found. As I have not had an opportunity to visit the hospital since, I cannot report the result, but the operation was so skillfully made, and the patient appearing so comfortable at the end, I have no doubt of her recovery. Dr. Lund informed me that they averaged about one case a day, and on some days they had two. I asked about the use of liquid air and was told that they had not tried it. Dr. Lund said it appeared so far to be only a caustic, and having many others of the same

nature, he had not yet experimented with it.

It is a pleasure to visit an institution so complete in all its details for the treatment of the sick. The cleanly glass cases for instruments, and the means for sterilizing everything for use, are perfect, and beautifully arranged.

I visited, also, the new McLean Asylum for the Insane, at Waverly. I was fortunate in finding Dr. Cowles, the superintendent, with whom I had some personal acquaintance, at home. This institution is now on the cottage plan, is located on high and beautiful grounds, from which the views are magnificent. The superintendent kindly conducted me over a considerable portion of the several buildings, where I found the accommodations and means of treatment for the patients are certainly not surpassed by any institution of the kind I have ever visited.

I also called at a private hospital for invalids conducted by Dr. Walter Channing, in Brookline. It has a charming elevation and accommodations for twenty patients. Dr. Channing was not at home, but Dr. Carter, his assistant, kindly took me through the rooms. In one apartment I found a patient that was under my care more than thirty years ago, and is now over eighty years old, and still in fair physical condition.

While on a short visit at Keene, New Hampshire, Dr. Faulkner, one of the physicians, took me through the local city hospital, so called, though under the management of a private association. They have accommodations for about twenty cases, and are constantly filled with sick and surgical cases. It is well kept and in perfect order. The building, formerly a private house, with a considerable amount of ground for garden purposes, was presented by an individual, Mr. Eliott, and is located in the center of the city. Improvements are contemplated, such as elevator and a separate building for nurses. The hospital is a necessity, and the citizens now wonder how they have lived without one for so many years.

Cordially yours,

C. K. BARTLETT.

A SUGGESTED MODIFICATION IN THE TECHNIQUE OF VACCINATION.

Minneapolis, Minn., Oct. 17, 1899.

To the Editor of the Medical Dial:

Dear Doctor: In Dr. Knut Hoegh's excellent article "Concerning Vaccination," appearing in your October number, a very desirable and useful method is described. Please permit me to suggest a slight modification for convenience sake. Fill the hypodermic syringe half full of sterile water; discharge all air; draw into the needle a minute droplet of vaccine; insert the needle one-eighth of an inch horizontally under the epidermis; discharge enough to produce a small whitish spot at the end of the needle. As the needle is withdrawn keep the puncture closed with superimposed finger.

The operation can be made painless by compression of the fold of skin. The incompressible column of water makes the deposit certain, and the method makes use of an ever-ready instrument.

G. D. HAGGARD, M. D.

Society Reports.

HENNEPIN CO. MEDICAL SOCIETY.

The stated meeting of the Hennepin County Medical Society was held at the Public Library, Oct. 9th, Dr. H. B. Sweetser presiding. About thirty-five members were present, as was also Dr. H. W. Foster of Bozeman, Montana, as visitor.

The special committee appointed to revise the fee bill made no further report and the bill as revised was adopted by the society and ordered printed and distributed to the members by the secretary. The president made a brief verbal report for the executive committee, after which some discussion arose as to a change of our place of meeting and, on motion, the executive committee was empowered to secure other quarters, whenever a suitable place can be found.

Dr. A. W. Abbott exhibited a retroperitoneal cyst and also an ovarian cyst with twisted pedicle, with full reports of both cases.

A paper entitled "Myasthenia Gastrica" was read by Dr. J. W. Bell, (see October number of The Medical Dial), which was followed by a general and interesting discussion.

Dr. A. W. Abbott inquired why patients suffering from this condition should not be allowed water with meals.

Dr. G. D. Head thought the rules for diagnosis and treatment more clearly stated in the paper than in text books. Most of his cases had been in complication with other conditions. Wished to ask whether the protruding abdomens of children were to be supposed to be due to stomach atony. Mentioned use of salol in diagnosis, and thought it valuable—to be taken by the mouth in capsules—and the urine examined one hour to one and one-half hours after. The diagnosis is difficult, even aside from the usual complications.

Dr. L. A. Nippert suggested the value of attention to teeth and the habit of rapid eating. Thinks nothing but the test meal satisfactory in diagnosis.

Dr. G. D. Haggard remarked that a small test meal often caused the stomach acid to be neutralized by saliva.

Dr. E. S. Strout gave a sketch of the process of using salol.

Dr. W. A. Jones meets disturbances of motility often among neurasthenics, in whom motor insufficiency is often widely distributed. Many fermentative cases are due to nervous insufficiency. Direct treatment often disappoints. Many methods of treatment do good by bringing systemic health rather than by direct action. The mind should be diverted from the stomach as completely as possible. As to the drinking of water: The moral discipline of abstention may be salutary in some cases. Otherwise the free use of water is positively beneficial. The stomach does absorb water—at least the water disappears. Antiseptic treatment is interesting and theoretically correct, but no satisfactory stomach antiseptic has been found.

Dr. Johnston wished to ask if the continued frequent use of hot water by the mouth might cause chronic congestion.

Dr. Hoegh asked: "How about ice water?"

Dr. Staples thought the name given to this condition fortunate. The condition may be brought on in convalescence from typhoid by distending the stomach with large quantities of fluid. Water in large quantities is injurious. Whisky is beneficial in some cases, also bitter ale. Lavage has probably done more harm than good in the aggregate. The resulting depression is injurious. It is of benefit in properly selected cases, but its use has been too promiscuous.

Dr. Sweetser wished to ask if there were no way of estimating the rapidity of secretion.

Dr. Bell, in closing: Water does injury when taken with meals. It is not absorbed by the stomach and distends and hampers it in its churning motion. Prefers to have it taken hot an hour or an hour and a quarter before meals. Has had no special experience with children, but thinks the enlargement of the abdomen not due to size of stomach, at least, only partially. Has little experience with the salol test. It is not now very much used. The test meal is much more accurate and it must be large enough. The "test breakfast" is too small. The test dinner should be used and several observations made. Dr. Jones' cases should be called neurasthenia gastrica, rather than myasthenia. The stomach is often the pivotal point with neurasthenics. Medical dyspeptics have disturbance of secretion rather than of motility. The fact of the abuse of lavage must be admitted. The modern form of tube has more openings and gives a spray or douche. Distention is objectionable and adds to prolapse. Not more than one pint of fluid should be used. A double tube prevents distention. Hot water may cause congestion if taken too hot. It should be taken one to one and one-quarter hours before meals.

Dr. C. F. Nootnagle presented a paper entitled "Secretory Diseases of the Stomach."

In discussion, Dr. Nippert asked how and when antacids should be used.

Dr. Johnston asked why hydrochloric acid should not be given before meals?

Dr. Bell agrees that differential diagnosis between malignant disease and syphilis may be very difficult and cited case. Hydrochloric acid is often absent in syphilitic disease of stomach. Did not agree that animal food alone caused hyperacidity. Thought egg-albumen well borne and also some other proteids.

Dr. Nootnagle, closing: Alkalies before meals do not produce any effect discoverable by tests. Alkalies after meals should only be taken to relieve pain. Did not restrict diet rigidly to carbohydrates, but allowed some proteids, meats finely divided, scraped beef being one of the best. Used silver nitrate solution in strength of 1-700 to 1-1,000.

The application of Dr. W. B. Murphy for membership was read and referred to the board of censors.

A letter from Noyes Bros. & Cutler, St. Paul, asking for the use of a room for two lectures on static electricity and X-ray work, was read and, on motion, the society voted to offer the use of the room.

The matter of entertaining the Association of Railroad Surgeons was informally discussed, but no action taken.

WESTERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

The ninth annual meeting of the Western Surgical and Gynecological Association will be held at Des Moines, Iowa, Dec. 27 and 28, 1899. Surgeons and gynecologists of the great West are cordially invited to affiliate themselves with this Association. The secretary will be glad to send application blanks on request. Titles of papers should be sent to the secretary as soon as convenient, but not later than November 20 to insure a place on the program.

H. C. CROWELL,
Pres., Kansas City, Mo.
GEORGE H. SIMMONS,
Sec. and Treas., 61 Market St., Chicago.

The theory that bacteria are indispensable to digestion has been laid to rest at last by Levin's research in the Arctic regions, reported in Hygiea, No. 2. He accompanied the Nathorst expedition and examined the intestines of various birds and animals killed. With the exception of one polar bear and two walruses, the intestines were found absolutely sterile, and in these only a few specimens of the bacillus coli were discovered. Bacteria were found in the water, one colony to 1 c.c., the number increasing with the distance from the surface. The air was found absolutely sterile. No colds nor catarrhs ever occurred among the men.—Jour. Am. Med. Ass'n.

Progress of Medicine.

SURGERY.

UNDER THE CHARGE OF
J. H. DUNN, M. D., W. A. HALL, M. D.
KNUT HOEGH, M. D.

THE GROWTH AND EXTENSION OF CARCINOMA.

(By William T. Councilman, Boston. Read before the Massachusetts Medical Society, June 13, 1899. Published in Boston Medical and Surgical Journal, Sept. 14, 1899.)

[The modern operation in cancer cases is of necessity a careful dissection of wide extent. It involves not only removal of the primary growth and of all secondary growths, but also the removal of the entire lymphatic-bearing tissues between them, as thoroughly as can be done without involving the patient's life. The pathological reason for this is very clearly demonstrated in Dr. Councilman's paper.]

The carcinoma is a tumor which arises from epithelial tissues, is characterized by unlimited growth locally, and by the formation of tumors of a similar structure in other parts of the body, Its microscopic structure shows two sorts of tissue, (1) epithelial cells arranged for the most part in solid masses, which vary in their size and form, growing in spaces which are called alveoli; (2) connective tissue which surrounds the alveoli and bears the blood vessels for the nutrition of the cells in the alveoli. This connective tissue is called the stroma. Neither stroma nor blood vessels penetrate the masses of epithelium.

If we take any normal epithelial structure and suppose that the cells at some point begin to multiply with unlimited activity and penetrate into the adjoining connective tissue, we have the structure of the carcinoma. It is not sufficient for the epithelium simply to proliferat. To explain the growth of the carcinoma, it will be necessary to consider for a moment the structure of the connective tissue. This is essentially formed of fibers, between which are cells. It carries the blood vessels everywhere, and in it lymphatics arise. In the tissue the cells lie in spaces which communicate with adjoining spaces and, from the enlargement and coalescence of these spaces, the lymphatics are formed. If we suppose that a carcinoma begins its formation by the epithelium growing outward into this tissue, then the growing cells of the tumor at once find their way into this system of communicating spaces and continue to grow in them. Every mass of epithelial cells is within such a lymph space of the tissue.

The carcinoma not only tends to grow locally in the way we have seen, but similar tumors are formed elsewhere. In carcinomas these secondary, or metastatic, tumors are found in those lymphatic glands which are connected with the primary tumor by lymphatic vessels. In carcinomas of the alimentary canal, the secondary growths are found not only in the lymphatic glands, but in the liver, the connection being by the blood vessels of the portal system. The metastases repeat the structure of the primary tumor. Differences in the size and arrangement of the cells which characterize the primary tumor are found in the secondary. The same tendency to degenerate, and the same form, are seen in the secondary. Something capable of producing the same growth must be carried from the primary tumor to form metastasis. By examining those lymphatic glands of the axilla, removed with a carcinoma of the breast, which, to the naked eye, present no enlargement or deviation from the normal, the beginning of the metastasis can be seen. It begins in the periphery of the gland where the lymphatics, coming from the primary growth, enter. Cells of the same character as those in the primary growth are found in the lymph sinuses, and they grow here, the remainder of the gland forming the stroma.

The growth advances along the lymphatics in two ways. Solid masses of cells, probably connected with the primary growth, may push their way along the lymphatic vessels. In carcinoma of the stomach, it is not at all uncommon to find the lymphatics of the peritoneum over the tumor, filled in this way with masses of cells. Secondly, by examining the tissue which is in the neighborhood of a carcinoma, and which is apparently not affected, we can often find single epithelial cells within the lymphatics. In certain cases the tumor cells may push their way into blood vessels. In carcinoma of the alimentary tract, metastasis, both by the lymphatics and blood vessels, is the rule,—probably explained by the presence of such numerous thin-walled veins in the tissue.

The full recognition by surgeons of the intimate relation between the cells of the tumor and the lymphatics has led to those methods of operation which have so reduced the danger of recurrence. We know that no carcinoma can be found so recent in its development that the lymphatic glands belonging to the part may not be affected. Further, that the way of extension is by the passage of cells from the primary tumor, or along the lymph vessels. It is of no use to remove the primary and secondary growth and leave a long street between the two which almost certainly contains straggling cells capable, each of them, of producing a new growth. Hence, tissue containing lymphatic vessels connecting primary growth

with lymphatic glands is removed as far as possible.

Cells from the tumor, each capable of developing a new tumor, may be implanted in the tissues by the knife in the course of operation; hence the care exercised in avoiding incision into the tumor in the course of operation.

[Not only is it bad surgery to cut into the tumor during the course of operation, but it is also poor surgery to cut across the lymphatics at any point between the tumor and the position of any possible secondary growth, as is evident from the statements made above.]

A. T. MANN, M. D.

GYNECOLOGY.

UNDER THE CHARGE OF
A. W. ABBOTT, M. D., F. A. DUNSMOOR, M. D.
J. H. RISHMILLER, M. D

TROPHIC DISTURBANCES OF BLADDER. FOLLOWING OPERATIONS.

Mirabeau (Cent. fûr Gynæ., 1899, No. 11) mentions the fact that the vesical irritation, frequently observed after an operation, is invariably referred to infection or mechanical injury. Sometimes this irritation has been due to ligatures making their way through the walls of the bladder. The author cites two cœliotomies, with persistent vesical symptoms, in which cystoscopic examination revealed a general atrophy and anæmia of the mucous membrane. This circulatory disturbance was evidently due to the abnormally small arteries. He, therefore, inferred that the collateral circulation had not been established as usual after ligation of the vesical arteries. In just such patients treatment of the vesical *per se* may do more harm than benefit. Massage and tamponade, with the view of softening the exudate in the neighborhood of the organ, are prudently indicated. Prophylactically the operator should avoid mass-ligaturing, but ligate the blood vessels separately, and, furthermore, sparing those as far as possible which supply the bladder. J. H. R.

URETHRAL RESTORATION BY GERSUNG METHOD.

Romm (Cent. fûr Gynæ., 1899, No. 8) cites a case as follows: After protracted labor the urethra was destroyed *in toto*, with the exception of the anterior wall. The orifice into the bladder was buried in cicatricial tissue. The writer restored the urethra by a flap operation, but disappointingly incontinence persisted. The operation was repeated and the canal thus formed was subsequently twisted on its long axis from left to right 180 degrees and then sutured. He then inserted into the bladder a silver catheter with a corresponding twist. Two weeks afterwards the patient could retain her urine from three to four hours. A month later the newly-formed urethra was dissected out as far as the bladder and given another twist of 180 degrees and sutured in such a manner and position that the external orifice was placed in the immediate proximity of the clitoris. A month hence the patient had entire control of her bladder. J. H. R.

VAGINAL HYSTERECTOMY WITH DOYEN'S CLAMPS.

Thrumin (Cent. fûr Gynæ,. 1899, No. 5) reports 31 successive operations in which the broad ligaments were temporarily compressed with an instrument devised by the author similar to the angiatribe of Doyen and Tuffer. The operations were bloodless, and convalescence was uncomplicated. The effect of pressure for two minutes before removal of the clamp—as disclosed by microscopical examination—is to produce obliteration of the arteries by adhesion of the opposed endothelial surfaces. The distal and proximal ends are plugged by thrombi; in other words, the tissues are mummified but not mortified. J. H. R.

CARCINOMA OF UTERINE CERVIX FOLLOWING SUPRAVAGINAL AMPUTATION.

Savor (Cent. fûr Gynæ., 1898, No. 50) cites the case of a patient 52 years of age who had been operated upon four years before for fibroma of the uterus. The cervix was not removed. Convalescence was protracted on account of a fistula communicating with the cervix. On examination the posterior lip of the cervix was found to be the seat of a cancer, involving the vaginal vault. The author extirpated the carcinomatious extension with great difficulty, owing to the firm adhesion to the bladder and the obliteration or atrophy of Douglas' pouch. The author refers to three other cases in Chrobak's clinic, in which the stump subsequently became carcinomatious. He regards these cases as a strong argument in favor of pan-hysterectomy. J. H. R.

THE CURE OF THE OPIUM HABIT.

McLeod, of Shanghai, announces that it is possible to cure the opium habit by means of bromide of sodium. He thinks that three ounces of the drug will suffice in most cases. He gives for the first two days doses of 2 drams in solution every two hours. On the third day 1 dram is given at each dose every two hours. —Western Med. Rev.

Fasting is better than feasting.

OBSTETRICS.

UNDER THE CHARGE OF
A. B. CATES, A. M., M. D. R. E. CUTTS, B. S., M. D.

INVERSION OF THE UTERUS.

W. M. McDonald (Am. Gyn. H. & Obs. Jr. Oct. 1899), in referring to the infrequency of inversion of the uterus, says that in clinics of Braun and Spaeth not a complete inversion occurred in 250,000 births, and in the Dublin Rotunda it was observed but once in 191,000 deliveries.

While hospital reports show this to be a very rare occurrence, yet statistics from private practice indicate that inversion takes place more frequently; due, as the author thinks, to the fact that the physician in his haste to terminate labor oversteps the bounds of safety and as a result inversion, or some other complication, arises. It is suggested that possibly the practice of the Credé method of expulsion of the placenta and the abdominal massage, which is almost universally taught now, to prevent post partum hæmorrhage, may be causative in producing inversion.

The article closes with a report of a case occurring after forceps delivery, in a patient suffering from secondary syphilis. As the hæmorrhage was severe, the placenta was delivered by the combined method, although traction on the cord was very gentle. The hæmorrhage continued after the delivery of the placenta, and upon examination the fundus uteri was found in the vagina. The fundus could be forced by the finger through the os, and then, with the nozzle of the fountain syringe and the pressure of the stream from the bag held at a height of eight feet, the inversion was completely reduced. Recovery uneventful.

R. E. C.

A CASE OF PUERPERAL SEPTICÆMIA IN WHICH ANTISTREPTOCOCCIC SERUM WAS USED WITH SUCCESS.

(Dr. T. B. Grimsdale reports the case in the Lancet of Sept. 9, 1899.)

Forty-eight hours after labor the patient had rigors. The uterus was douched twelve hours later, and a fall in temperature resulted. Temperature again returned, so curettement was finally performed. The fever continuing, on the ninth day ten cubic centimetres of antistreptococcic serum were injected into the tissues of the abdominal wall. On the eleventh and twelfth days the serum injected was repeated, but on the thirteenth day the injections were discontinued, since the temperature of 104° and pulse of 120° had been restored to normal, with all other symptoms improved. tococci present. The temperature and pulse began to rise gradually, until three days later the temperature became 103° and the pulse 120°, with a return of the other unfavorable symptoms. Ten cubic centimetres of the serum were again injected, and used daily for fourteen days, until it was found streptococci would not grow in the blood serum of the patient. The injections were then discontinued, although the temperature was two or three degrees above normal; but it gradually fell and in the course of a week became slightly subnormal. Aside from small doses of quinine no other treatment was used. The patient was in the hospital seven and one-half weeks.

Dr. Grimsdale thinks the disease would have been greatly shortened had he not discontinued the use of the serum the first time. He considered it a mistake to take for granted, because the temperature and pulse became normal, that the blood was free from streptococci, since they were shown to be present all the time by later examinations of cultures made at that time. After these injections the temperature became normal and remained so for twenty-four hours when it began to rise gradually for three days, showing that nearly all the streptococci were destroyed by these injections but that the few remaining multiplied until the symptoms were reproduced.

The immediate effects of the injections upon the patient were excellent. The headache, the fear of impending death, and the despondency were all removed when the injections were used. Toward the end of the course of treatment the patient suffered considerably from urticaria, and later complained of severe pains in the limbs and the muscles were painful upon pressure.

Dr. Grimsdale feels certain that the patient's life was saved by the serum.

R. E. C.

INGROWING NAILS.

I wish to call attention to a method of treatment for this painful affection, which I have used for many years, and I do not remember a failure to promptly effect a cure.

1. Remove all pressure from the nail by cutting away a piece of the shoe.
2. Disinfect with hydrogen dioxide until no more "foam" appears.
3. Apply a drop of strong solution of cocaine in the base of the ulcer.
4. Apply a drop of Monsell's solution to the ulcer, then cover loosely with gauze. Repeat this process every second day, until the edge of the nail is released, by the retraction of the hypertrophied tissue. The patient suffers no pain from the application, and all pain has disappeared the second day. The cure is effected in a week or two, without inconvenience or interference with business.—Dr. Kinsman, in Columbus Medical Journal.

PEDIATRICS.

UNDER THE CHARGE OF

H. B. SWEETSER, M. D. J. P. BARBER, M. D

ENLARGED GLANDS IN CHILDREN.

Schleich, in an article on this subject (Pediatrics, Oct. 1st, 1899), takes occasion to explain his theory of immunity in infectious diseases. He compares immunity of this kind to the drug habit. He has shown experimentally that morphine, cocaine, caffein, etc., may be given in ever-increasing dosage without intoxication, but that the initial dose introduced within the cranial cavity of the animal produces marked intoxication. He reasons from this that more and more of the drug must be used on account of the continual irritation of the lymph channels, causing a narrowing of their caliber, so that only a limited portion of the drug can be absorbed and reach the brain. The balance of the drug remains within the lymphatic system, where it becomes chemically indifferent through oxidation, disoxidation, subdivision, etc. "There is, therefore," he says, "originally only a local cellular immunity at the site of entry, restricted to a single division of the lymphatic system, which is dependent upon original injury." He refers to Pasteur's anti-rabic inoculations and the fact that after an animal has been immunized by the injection of the virus of rabies under the meninges of the brain produces rabies and concludes from that, that "immunity is but a cellular local conception."

"The relative acquired immunity toward scarlatina and measles may also be conceived as a closing up of the lymph radicals at the site of entry of the virus. Only in this manner can be explained the fact that children with acquired immunity to epidemic scarlatina may still contract surgical scarlatina. The ordinary avenues of infection, whether respiratory or digestive, have been rendered impervious by obliteration of the lymphatics in these localities, but the virus may still gain the system by way of the cutaneous lymphatics—or, in other words, the entire body has not been rendered immune by the disease, but only a definite local territory."

It would seem that Schleich will have to answer several objections before his theory of immunity can be accepted. In the first place, if tolerance for a drug and immunity against infection is caused by a local obliteration of the lymph radicals, why does that not establish tolerance for any other drug, or immunity against any other infection in the same locality? In the case of drugs, if repeated injection in a certain locality produces tolerance by obliterating the lymph radicals in that locality, why does not the same drug taken into the stomach or injected in another locality where the lymph radicals were not obliterated cause toxic effects? It is generally believed that the exanthematous diseases gain entrance into the system through the respiratory tract. If that is true, an attack of scarlet fever, according to Schleich's theory, ought to immunize the patient against every other infection contracted by that route. The action of the various antitoxins would be very difficult to explain by this theory. It is hard to conceive how the antitoxin of diphtheria, for instance, injected in the thigh or back could obliterate the lymphatic radicals of the throat.

The practical part of the article is much better than the theoretical. He makes a strong plea for the strictest conservatism in the surgical treatment of the lymphatic glands of children, especially of those about the neck. Simple inflammatory enlargement without suppuration should never be treated surgically. Local and constitutional treatment and removal of the source of irritation always suffice. Simple suppuration is treated by incision and packing. Suppuration with multiple foci are best treated by extirpation without attempting to remove all of the capsule. Cheesy glands are always best treated by incision of the capsule and enucleation of the contents with the curette, provided thorough constitutional treatment has not succeeded in causing resolution. He thinks a syphilitic taint is behind caseous glands oftener than is supposed and advises specific medication before resorting to surgical measures.

J. P. B.

Book Notices.

THIRTEEN DOLLARS FOR FOUR DOLLARS.

A book the price of which when originally published was twelve dollars alone and a year's subscription to the New York Lancet (Address 156 Fifth Ave., New York) is offered for four dollars. The book is Flint's "Encyclopedia of Medicine," a work covering practically every subject in medicine.

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MULTIPLE PISTOL SHOT WOUNDS.

In an article in the New York Medical Journal for July 8, 1899, Dr. George Woolsey, surgeon to Bellevue Hospital, speaking of "Multiple Pistol Shot Wounds of the Intestine," says, "The necessity of operation is generally admitted. First, an enlargement and exploration of the wound to determine whether it has penetrated the abdominal wall; then a laparotomy in such a position as to reach all parts of the peritoneal cavity, and especially those that lie in the track apparently taken by the bullet. The incision, as a rule, is best made in the middle line, through the rectus, an inch or so to one side of or through the semilunar line. As soon as the fact of perforation is known it is a mistake to confine ourselves to a small incision. The operation should also be done as soon as possible. On opening the abdomen in any case the first thing to do is to check hemorrhage if it exists. Perforations of the intestines should be closed by Lembert sutures. Two rows of continuous sutures are safer and more rapidly applied than a single row of interrupted sutures. It is safer to cleanse all parts thoroughly. If we are uncertain of the perfect closure of any perforation, if free serous exudation has begun from peritonitic irritation, due to infectious matter, or if more marked signs of peritonitis exist, most of us would prefer to drain. In cases of perforating pistol shot wounds safety is the paramount consideration."

Surgeon Beck, of the Thirteenth Minnesota, says that, "To the small-calibre bullet of the insurgents' Mausers the wounded boys owe their lives and a continuance of their usual friendly association with good arms and legs. In the bony structure of the body the Mauser bores a clean little hole, rarely fracturing a limb; in the skull it takes a center shot to kill." He says that he has knowledge of fully one hundred men shot through the chest cavity in every portion except the heart, who recovered. But while the injuries brought about by bullets from the army rifles of to-day are, on the whole, less severe than was formerly the case, abdominal wounds are as fatal, if not more so, than in former times."

Surgeon Beck further says: "Through the soft abdominal tissues the Mauser is always fatal. Wounds of the intestines, stomach and spleen always kill. Every operation for resection of wounded intestines resulted in death, and the operation is now entirely abandoned."

This is in line with the opinion of a large number of army surgical authorities, although views differ considerably as to whether in penetrating wounds of the abdomen a radical or conservative treatment should be pursued.

Dr. William Parker, of New Orleans, discussing this point, records his belief that in abdominal wounds caused by the small modern bullet laparotomy should not be attempted in the field.

Dr. Nicholas Plum lays down the dictum that laparotomy in penetrating gunshot wounds of the abdomen is indicated in all cases in which life is threatened by hemorrhage of visceral wounds, and the general condition of the patient is such as to sustain the expectation that he will survive the immediate effects of the operation.

Sir William McCormac advises, when penetration has been diagnosed, that abdominal section should be performed as quickly as possible.

The fact, however, may be noted here that the mortality which has up to the present followed penetrating wounds of the abdomen treated on the battlefield, or in war hospitals, has been extremely high. The French lost 91.7 per cent. of their cases in the Crimea, and the English 92.5 per cent. In the American war the death rate was 90 per cent.—Medical Record, July 8.

INTOXICATION IN APPENDICITIS.

Le Dentu, in a paper read before the Paris Academy of Medicine, accepts the view that appendicitis is toxic as well as infectious, and says that he has occasionally recorded marked evidences of intoxication. He gives two examples: one of a toxic meningitis, and the other of a toxic icterus, which developed during the course of appendicitis. The icterus was present throughout the course of a chronic appendicitis, promptly disappearing when the case was cured by operation.

THE ALARMING INCREASE OF CANCER.

According to the Physician and Surgeon, Prof. Roswell Park makes the startling prophecy that if for the next ten years the present relative death-rates are maintained, in 1909 there will be more deaths in the state of New York from cancer than from consumption, smallpox, and typhoid fever combined.

For a number of years back, the English statisticians have been calling attention to the rapid increase of cancer in England. It has been almost universally noted that flesh eating and cancer are increasing at about the same ratio. The rice-eating natives of India are almost wholly free from cancer, which is found to be most frequent in occurrence among pork eaters and those who make free use of animal food. It is impossible for human beings to

make cemeteries of their stomachs without suffering the natural consequences of polluting the vital stream with the products of disease and putrefaction. This is the means whereby a fertile soil is prepared, not only for cancer, but for consumption and many other maladies.

The Supreme Court of Iowa, Gambell, judge, in the case of Dr. George B. McClellan against J. F. Metzer, sheriff of Marion county, declared the medical practice law unconstitutional.

CINNAMON AS AN INTERNAL ANTISEPTIC.

Cinnamon is recommended as an internal antiseptic by Dr. C. G. Grant (British Medical Journal). When in Ceylon he discovered that persons working in cinnamon gardens seemed to be immune to malaria. On trial he found it valuable in gastro-enteritis, recurrent boils, and, he thinks, in typhoid fever. He was astonished by its wonderful influence in influenza, and earnestly recommends its free use by others.

The reports of the Board of Health for the state of Massachusetts say that out of every 1,000 persons dying in the state between the ages of twenty and thirty, 597 (almost 60 per cent.) die of tuberculosis of the lungs.

It is stated that Mrs. Mary Baker Eddy, of Christian Science fame, is being sued in amounts aggregating $500,000 by Mrs. Josephine Curtis Woodbury, of Boston. Seven different suits are pending, all of which are for alleged libelous remarks made by Mrs. Eddy at the First Church of Christ, Boston, Sunday, June 4.—Journal A. M. A.

A form of malarial fever, which has for many years caused great ravages in certain parts of Central Asia, is on the increase, and is spreading over a large area, especially in the direction of the Steppes. The Russian medical and sanitary staff in the affected districts are devoting themselves to the task of combating the disease wth ever-increasing energy.—London (Eng.) Health.

Take two pounds of good prunes and water enough to make five pints; boil for fifteen or twenty minutes, and to this, when strained, add five pounds of sugar and one pound each of modified nonbitter extracts of cascara sagrada and aqueous fluid extract of senna, and flavor with a few drops of oil of coriander and peppermint. While this yields a good preparation, it may be improved by adding one dram of saccharin and enough simple syrup to make one and one-half gallons. This will be found an excellent laxative syrup.—Western Druggist.

I do not consider traction on the tongue as being perfectly free from all danger; at least, I cannot imagine why muscle bundles should not be torn in the manipulations. By tickling the epiglottis nothing can be injured. We know by daily experience how anxiously we try to avoid touching the epiglottis in intralaryngeal operations, even after thorough cocainization. We are afraid of the reflex caused by the least sensation of tickling. Ought we not to learn by this experience? Therefore tickling the epiglottis might perhaps be tried as a means of resuscitation.—W. Freudenthal.

The fifth Triennial Prize of Five Hundred Dollars, in deed of trust, will be awarded to the author of the best essay on "The Various Manifestations of Lithaemia in Infancy and Childhood, with the Etiology and Treatment." The prize is open for competition to the whole world. The essay must be in English, typewritten, distinguished by a motto, accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer. All essays in competition must be sent to Dr. Richard C. Norris, Chairman of the Prize Committee, College of Physicians of Philadelphia, Pa., and must be in his hands on or before January 1, 1901. The committee reserves the right not to make an award if no essay submitted is considered worthy of a prize.

Capitan (La Med. Moderne; Med. Rev. of Reviews) first mentions angina pectoris as a type of disease in which vaso-dilatation is indicated and then observes that our stock remedies (amyl nitrite, nitroglycerine) are too transitory in their action. For a number of years substitutes have been sought for. Several good drugs have unpleasant collateral action (nitric ethers of the fatty-acid series, chlorhydrate of hydroxylamine), which have resulted in their abandonment. Recently the tetranitrate of erythol and hexanitrate of mannitol have been introduced. About an hour is required for them to reduce arterial pressure, but the result persists for six hours (dose, 6.5 mgm.). The indications for these remedies are angina pectoris, kidney diseases, aneurism, Raynaud's disease, migraine, etc., etc.

Dr. E. W. Scripture described before the American Association for the Advancement of Science the method of producting anæsthesia by the direct application of an electrical current without the application of drugs. An alterating current with equal positive and negative phases was made to traverse the nerve. At a proper frequency of about 5,000 complete periods in a second it can be made to cut off all sensatory communication by this nerve. Needles can be run into the part of the body supplied by this nerve without any pain being felt.—Scientific American.

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JOUR. OF THE AM. MED. ASS'N, Chicago. (10). September 23: Does the removal of the ovaries exert beneficial influence on the subsequent progress of malignant diseases, E. E. Montgomery, Philadelphia.—Relations of headache to affections of the eye, S. D. Risley, Phila.—Headaches of gastro-intestinal disorders, F. Billings, Chicago.—Quantitative estimation of albumin in the urine, C. W. Purdy, Chicago.—Accidental or spurious albuminuria, C. G. Stockton, Buffalo.—Observations on tonsillectomy, J. H. Coulter, Chicago.—Diseases of the antrum of Highmore, a study of one hundred and fifty cases, L. C. Cline, Indianapolis.—Operation for undescended testicle and congenital inguinal hernia, A. D. Bevan, Chicago.—Chloretone, a new hypnotic and anesthetic, T. B. Aldrich, Baltimore.—The douche, its rise and decline, but present restoration, F. A. Stahl, Chicago.

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WESTERN MEDICAL REVIEW, Lincoln. (10). October: Diagnosis in neurotics, I. C. Philbrick, Lincoln.—Aortic aneurism, with report of cases and exhibition of specimens, J. N. Hall, Denver.—The treatment of pulmonary tuberculosis by the inhalation of antiseptic nebulae, H. M. Thomas, Chicago.—Upon cancer of the rectum, its treatment, C. C. Allison, Omaha.—Abortion (second paper), A. D. Wilkinson, Lincoln.—The plague (ed.).—The Victoria cross (ed.).—The present aspect of the tuberculosis question (ed.).—A New Yorker's idea of the code of ethics (ed.).

VERMONT MEDICAL MONTHY, Burlington. (15). September: The history of the medical department of the University of Vermont (illustrated), H. E. Lewis, Burlington.—A new preparation of iron in the treatment of anaemia, H. P. Loomis, N. Y. C.—Some remarks on catarrh, H. Thompson, St. Louis.—The treatment of the diseases of the uterus and vagina, R. A. Gunn, N. Y. C.—Proper feeding of infants and invalids (ed.).—This issue is a souvenir edition, complimentary to the Vermont State Medical Society, and has full descriptions of the medical institutions of the state (illustrated).

MEDICINE, Detroit. (20). October: Drugs in cardiac insufficiency, O. T. Osborne, New Haven, Conn.—Penetrating wounds of the chest, J. B. Murfree, Murfreesboro, Tenn.—A new departure in medical society work, the pathological department of the Indiana state medical society, F. B. Wynn, Indianapolis.—Ectopic pregnancy, J. W. Long, Salisbury, N. C.—Etiology of eclampsia, C. B. Reed, Chicago.—Editorials: Treatment of diabetes mellitus; the Chicago drainage canal; milk supply of cities; shall bullets be removed; a method of disseminating malarial poison; pachymeningitis; operative treatment of appendicitis; change in type of general paralysis of the insane; contagion of cerebrospinal meningitis; Kernig's sign in meningitis and Frankel's symptom in tabes; obliteration of the bile duct; the preservation of fruits and fruit juices by saccharin.

AMERICAN X-RAY JOURNAL, St. Louis. (20). October: Excitation of the Crooke's tube by the static machine, J. T. Pitkin, Buffalo.

SANITARY HOME, Fargo, N. D. (10). November: Hygienic adaptation in student-life, W. W. Hastings, Lincoln, Neb.—The educational work of Tuskegee, Booker T. Washington, Tuskegee, Ala.—Vaccination evils, D. H. Reeder, LaPorte, Ind.—Distilled water for city supply. E. C. Hargrave, Bay City, Mich.—Books on nature study (ed.).—Poison in potatoes (ed.).

BUFFALO MEDICAL JOURNAL. (25). October: Malaria complicating the puerperium, G. A. Himmelsbach, Buffalo.—Some medico-legal aspects of trauma in relation to diseased cerebral arteries, W. C. Krauss, Buffalo.—Edema, S. Y. Howell, Buffalo.—Rhynophyma, K. Wende, Buffalo.—Editorials: The medical directorship of the exposition; street noises and health; sanitation at the fair; the giving of certificates.

NORTH AM. JOUR. OF DIAG. AND PRAC., St. Louis. (10). October: Feeding in acute disease, with clinical reports, R. C. Kenner, Louisville.—The treatment of uncomplicated suppuration of the middle ear, H. A. Alderton, Brooklyn.—Report of four cases of sarcoma treated by injection of erysipelas and prodigious toxins, C. M. Nicholson, St. Louis.—A contribution to the treatment of gonorrhea and simple urethritis, E. E. Holt, St. Louis.

MEDICAL FORTNIGHTLY, St. Louis. (20). October 2: On some structural varieties of the enlarged prostate relative to treatment, R. Harrison, London.—Nosophen and antinosine, a clinical lecture, W. A. Mann, Chicago.

October 16: Aortitis and angina pectoris, Lancereaux, Paris.—The state vs. the child, M. V. Ball, Warren, Penn.—Physiology (19th paper), A. L. Benedict, Buffalo.—Scattered leaves from a physician's diary (No. 10), A. Abrams, San Francisco.

MEDICAL COUNCIL, Phila. (15). October: Blue babies, A. H. Leuf, Phila.—First report on a case of chronic gastric ulcer in childhood, W. L. Johnson, St. Louis.—One woman's obstetric history, S. M. Ward, Hampton, N. H.—Treatment of whooping cough with bromoform, C. W. Ingraham, Binghamton, N. Y.—Immersion bottles, J. S. Arnold, Washington.—A case of tetany, H. F. Smith, Pony, Montana.—The diagnosis of scarlet fever, P. F. Barbour, Louisville.—Chronic malaria, A. G. Servoss, Havana, Ill.—Treatment of typhoid fever, J. J. Davis, Chicago.—Inspection of the nasal cavities, second paper, E. B. Gleason, Phila.

N. W. LANCET, St. Paul. (10). August 15: The determination of sex, F. A. Dunsmoor, Minneapolis.—The advance of medical education in the United States, F. Staples, Winona.—Diet in typhoid fever, E. J. Abbott, St. Paul.—Bronchial pneumonia, E. H. Bagley, Lake City.

September 1: The lithaemic habit, F. C. Baier, Owatonna.—Constipation in infants and children, its cause, nature and management, C. G. Slagle, Minneapolis.—The relation of pelvic disorders to nervous and mental diseases, C. E. Riggs, St. Paul.—Hygienic prophylaxis through legally enforced vaccination, etc., E. E. Bigelow, Owatonna.—Throat and nose disinfection in the presence of b. diphtheriae, J. H. Adair, Owatonna.—Progress of medical diagnosis, H. H. Witherstine, Rochester.

September 15: Recent advance in gynaecology, C. A. Stewart, Duluth.—Perineo-vaginal incisions for threatened rupture of the perineum, L. A. Fritsche, New Ulm.—Observations of inguinal hernia, H. L. Staples, Minneapolis.—The policy of state sanitariums for consumptives, R. M. Phelps, Rochester, Minn.—Care of the new born, H. W. Bissell, St. Paul.—A report of a fatal case of embolism, with autopsy, W. T. Adams, Elgin.—Neuroma of the median, removal and restoration of the function, A. W. Dunning, St. Paul.—The part of the operating room in modern surgery, F. Staples, Winona.

October 1: Some observation upon the medical service of the late war with Spain from the standpoint of the volunteer surgeon, T. C. Clark, Stillwater.—A case of labor complicated with nephritis, T. L. Hatch, Owatonna.—Observations on the treatment of tuberculosis of bones and joints, C. H. Mayo, Rochester.—Some abuses in nasal surgery, W. S. Laton, Minneapolis.—The need of more systematic instruction in the diseases of advanced life, J. W. Bell. Minneapolis.

MEDICAL RECORD, N. Y. C. (10). September 23: The legal versus the scientific test of insanity in criminal cases, C. F. MacDonald, N. Y. C.—The present status of appendicitis, with report of forty-five cases, F. L. Hupp, Wheeling, W. Va.—On the prevention of tuberculosis, C. Strueh, Chicago.—Removal of exostoses of the external auditory canal by a hook, B. McAuliffe, N. Y. C.—Nephrorrhaphy and stripping of the appendix through a lumbar incision, for right floating kidney and painful appendix, J. C. Stinson, San Francisco.—An improvised vaccine expeller, Boyer, United States army.—A typical case of vaccinella, W. E. Fowler, Huntsville, Texas.—A pipestem in utero, W. J. Greanelle, N. Y. C.

September 30: A further view of the management of the deformity of hip disease, A. B. Judson, New York.—The neglect of sexual symptoms in the treatment of the male genito-urinary organs, Follen Cabot, N. Y. C.—The induction of premature labor in cases of albuminuria, Elizabeth Jarrett, N. Y. C.—The toxic origin of certain neuroses and psychoses, G. W. McCaskey, Fort Wayne, Ind.—Dangers of headache powders; report of a case, with tests for the suspected ingredients, Sobel, N. Y. C.—A case of hereditary arthritis deformans terminating in fatal pernicious anaemia, J. S. Billings, N. Y. C.—Report of two cases of acute suppurative osteomyelitis, G. H. Grant, Richmond, Ind.

October 7: On some important points regarding perfection of asepsis, C. Beck, N. Y. C.—The surgical treatment of gall stones, F. C. Ferguson, Indianpls.—A new method of reducing old dislocations of the lower jaw, T. A. McGraw, Detroit.—Supplementary note on the etiology of scarlatina, W. J. Class, Chicago.—The pulsatory hand and foot phenomena, W. Moser, Brooklyn.—Anomaly of the long tendon of the biceps muscle of the arm, J. D. Craig, Albany.—A tack in the lung for seven years, A. V. Jova, Newburgh, N. Y.—Empyema, sacculated between the heart and the lung, W. S. Dodd, Cesarea, Turkey in Asia.—A severe case of eclampsia complicated by a marked erythema multiforme, J. D. Voorhees, N. Y. C.—Excision of the hip, with skiagraph taken after five years, A. E. Isaacs, N. Y. C.—Bullet wounds of intestine, operation, recovery, G. Sherrill, Stamford Conn.—The dracunculus medinensis, John Patterson, Constantinople, Turkey.—Typhoid perforation in a case in which the widal reaction was absent, operation, death, T. W. Jackson, Pinar del Rio, Cuba.—Wood pulp as a material for poultices and surgical dressings, F. T. Gordon, United States navy.

October 14: A contribution to the study of the gastric crises of tabes, S. Basch, N. Y. C.—Ventral fixation of the round ligaments for retroversion and prolapsus uteri, A. Monae Lesser, N. Y. C.—An interesting case of hydrocephalus with pseudo-spastic spinal paralysis, F. S. Kolle, Brooklyn.

October 31: The early diagnosis of cancer of the stomach, J. C. Hemmeter, Baltimore.—The paralyses following general anaesthesia, W. M. Leszynky, N. Y. C.—A psychological study of jurors, T. D. Crothers, Hartford, Conn.—Renal casts—their significance and detection, J. H. Linsley, Burlington, Vt.

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Mr. W. D., aged 23, residing with his parents on Madison street, a few blocks from my office, called me in some weeks ago for treatment. I found the young man in bed and in a very bad condition. He was not only suffering from a severe injury received whilst following his vocation, but also with a severe cough with copious "coffee-ground" expectoration, which, upon microscopical examination, proved to be tubercular. It is now about two weeks since I started him on "Maltine with Creosote" and to my astonishment found upon my last examination that his cough and expectoration had both ceased. I find, upon palpation and phenendoscopic auscultation, great improvement in his right lung as well as the apex of the left one. I can't speak enough in favor of "Maltine with Creosote" and shall use it upon all my pulmonary patients hereafter.

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Andery (Berliner Klinische Wochenschrift, No. 15, 1899) has noted in a number of cases preputial herpes preceding the development of a chancre, and regards the outbreak of an eruption of this kind in a young man who has been exposed to the disease as highly suggestive of syphilitic infection.—Therapeutic Gazette.

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Electricity as a therapeutic agent, while quite popular with a few specialists and wealthy practitioners, is employed by the majority of general practitioners with no scientific precision, because of lack of suitable apparatus. The results are poor, for to obtain good results good apparatus is necessary. It is therefore for this reason that electricity is decried by many as a valueless agent, while in reality it is a very valuable means of curing a large number of

nervous and muscular affections. The idea prevails among many practitioners that electricity can be administered scientifically only by means of large, stationary and expensive "machines." The price and impossibility of moving the batteries from the office to the bedside of the patient have proven objectionable features, preventing the general introduction and practice of electrotherapeutics. It is perhaps of interest to know that the most renowned specialists in Europe, for example Dr. Erb, who has become famous through his lectures and writings on electrotherapy, use, in their private practice, small portable batteries. Of course the term "small portable" is not to be confounded with the so-called family batteries, for self-treatment, which, as a rule, are not worth the material used on them. The erroneous idea that large liquid cells yield more electro-motive force and amperage than small dry cells has prejudiced the profession against anything but stationary cells. We know to-day that the size of the cell has nothing to do with its electro-motive force and that a small dry cell about as large as a vaginal speculum will do more for a longer period of time than, for example, a Laclede sal ammoniac cell. The cost of renewing a dry cell is not larger than a refilling and keeping in good order of large acid cells.

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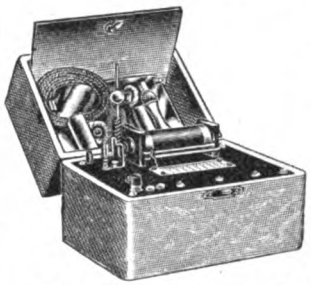

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A MECHANIC LAXATIVE BY THE MOUTH.

Dr. Henry S. Upson, of Cleveland, O., in the Philadelphia Medical Journal, after condemning mechanic irritants, as bran, oat-meal, seeds, etc., and chemic irritants, as acid fruits, drastics, etc., as all tending to be followed by a return of the constipated condition of the bowel, recommends liquid petrolatum, a quarter to a half tumbler full (two to four ounces). It is suitable alike to infants and adults. It is better than vegetable oils, as it does not become rancid.

Orthoform is a new local anaesthetic which is said to be non-poisonous, which lessens the amount of secretion in a wound, prevents putrefaction and stimulates the healing process. In burns of the third degree it is very valuable, also in painful ulcers, used as a dusting powder or ointment. In cancer of the stomach it has been given internally, in daily doses of 5 to 15 grains. The ointment contains 10 per cent. of orthoform. Being non-poisonous it may be used in full strength as a dusting powder.

LEARNING TO SEE AT FORTY.

As reported Dr. Minor (N. Y. Med. Jour., Vol. XVIII., No. 19). The author reports a case of a male blind from birth, who, when the cataract was removed from each eye, could see and judge distance, color, and had binocular vision. The fields of vision were normal.

The theory of the progressive development of both the optic nerves and a greater part of the optic tract, occurring after birth, as a result of the functional activity of the eyes, meets with an exception in this case. He says, "It is probable that the perception of light possessed by my patient may have kept these parts intact, but it is difficult to understand how they were ready to assume such perfect functional activity as was noted, if there is really as much in the theory of development being dependent upon functional activity as is currently supposed."—Post-Graduate.

The tingling sensation in the arms and fingers experienced by middle aged people on waking, especially after falling asleep in the day time, is supposed to be due to a rheumatic taint; anyway, the iodide of ammonium is a valuable remedy in this condition given in doses of three grains or more every four hours.

There are two reasons why gelsemium sometimes gives uncertain results. (1) Because the preparation obtained is of an inferior grade, (2) because the doses are administered too far apart. For instance, in facial and lumbar neuralgia ten to fifteen minims should be given each two hours until pain is relieved or a tonic effect warrants its discontinuance.

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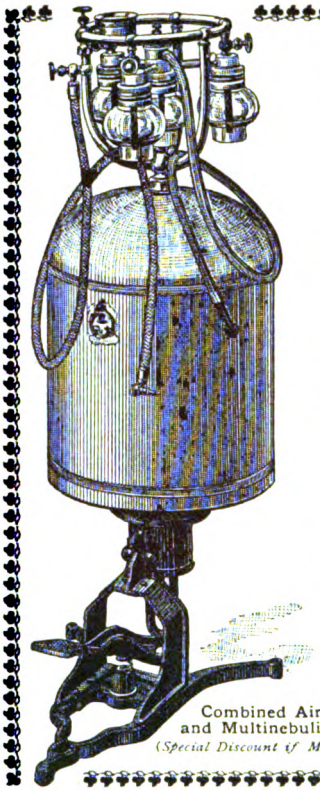

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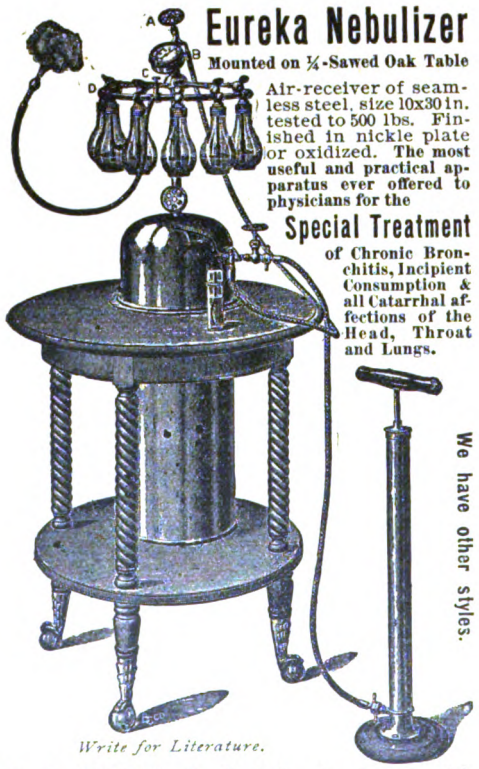

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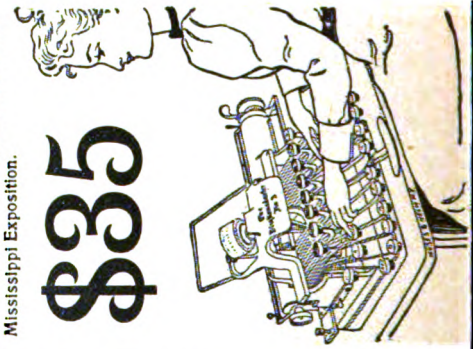

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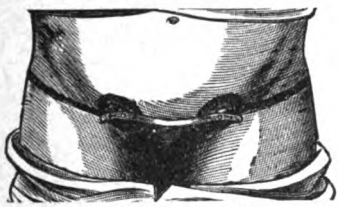

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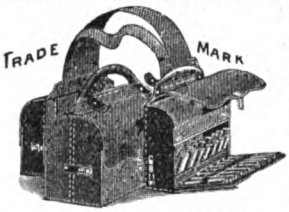

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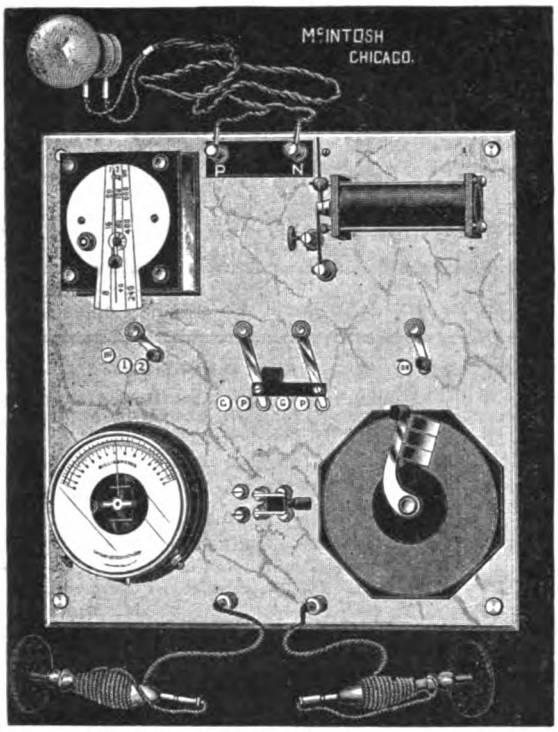

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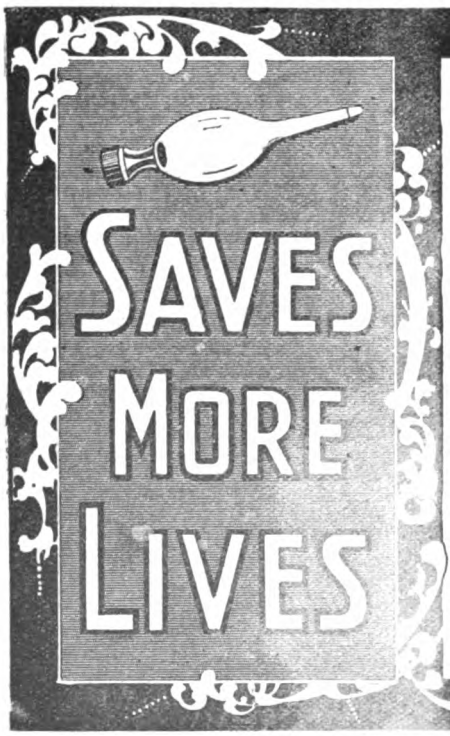

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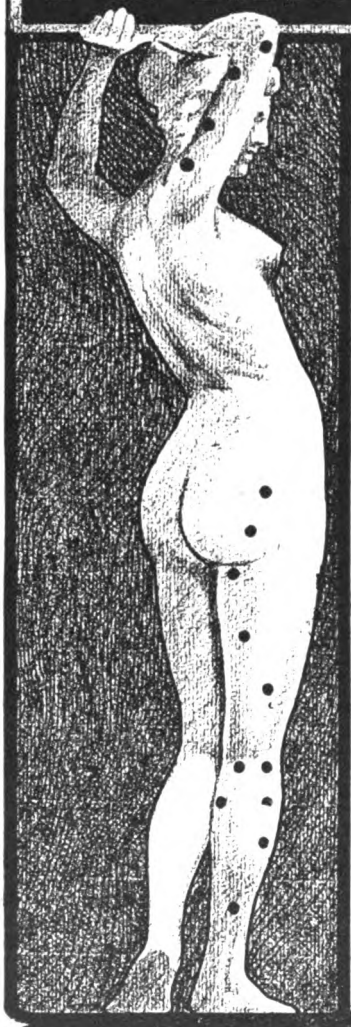

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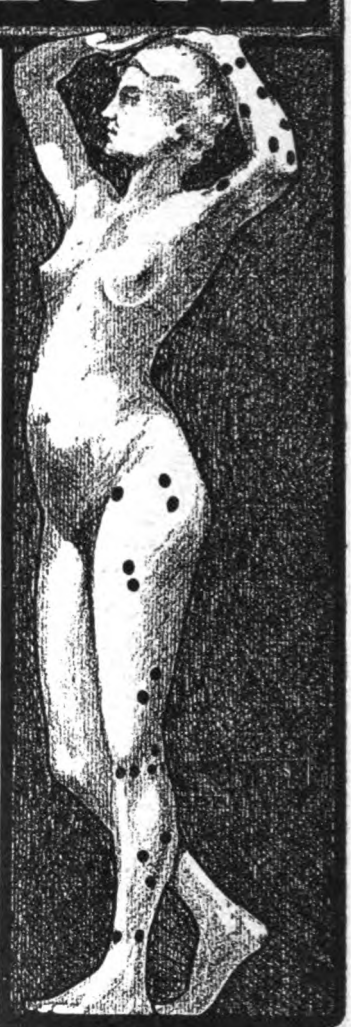

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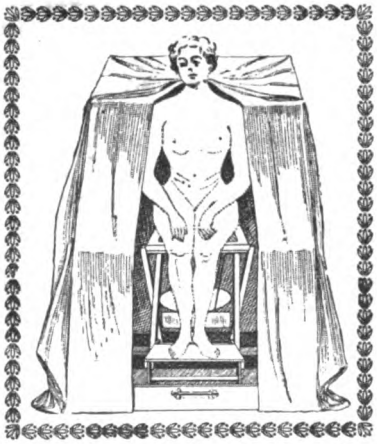

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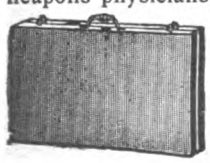

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THE MEDICAL DIAL

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Original Articles.

*OPERATION ON THE CERVICAL GANGLIA OF THE SYMPATHETIC FOR EPILEPSY, GLAUCOMA AND EXOPHTHALMIC GOITER.

By Emory Lanphear, M.D., Ph.D., LL.D.,
St. Louis, Mo.
Formerly Professor of Operative Surgery in the Kansas City Medical College, and Professor of the Principles and Practice of Surgery in the St. Louis College of Physicians and Surgeons.

I wish to briefly mention an operation which has of late attracted much attention in St. Louis, viz.: Jonnesco's operation (excision of the cervical ganglia of the sympathetic) for glaucoma, exophthalmic goiter and epilepsy. A number of operations have been made by Dr. James Moores Ball, Professor of Ophthalmology in the St. Louis College of Physicians and Surgeons, Dr. T. C. Witherspoon, Professor of Surgery in the Marion Sims College of Medicine, and myself—with varying results. It is of the practical points only (methods and results) I will speak, leaving to neurologists the task of explaining the cause of the changes wrought by the surgeon.

GLAUCOMA.

It is in glaucoma that the most remarkable and satisfactory results have been obtained—results which could in no way be attributed to "suggestion" or to the mental effect of this operation per se. Numerous patients have been subjected to the operation, under the observation of some of the most competent ophthalmologists of the world; with an undoubted verdict in favor of the procedure. Though it has not caused much commotion in the surgical world, for the relief of glaucoma, Jonnesco, of Bucharest, has for quite a time advocated removal of the superior cervical ganglion of the sympathetic. In Semaine Medicale, Oct. 20, 1897, he gave his first published account, recording a few operations and claiming most remarkable results; thus:—A man of fifty had had glaucoma for six years, with total loss of vision for four years; very soon after operation tension fell to normal and vision was restored sufficiently to enable him to count fingers at six feet! Subsequently he operated upon a comparatively large number of patients, with equally gratifying results in all but two cases.

Notwithstanding the satisfactory termination of these cases, the operation has been subjected to considerable criticism—chiefly by those who have not tried it or even watched the progress of a case after operation. Panas, of Paris (Bulletin de l'Academie de Medicine, May 24, 1898), commenting upon Jonnesco's work, claimed that the cases are too few and the reports too early after operation to make it advisable to adopt sympathectomy as a treatment of either acute, subacute, chronic or simple glaucoma. Hansell and Reber, of Philadelphia (Gould's Year-book of Medicine and Surgery, 1899), say: "Panas is right in contending against the adoption of so serious an operation when the results claimed are based upon insufficient data."

Nevertheless, experiments are being made in St. Louis, and with promise of success. Dr. James Moores Ball, with his assistant, Dr. E. C. Renaud, has operated upon a number of patients, with fairly satisfactory results, as in one case of chronic glaucoma (which I saw with them) a patient who had scarcely light-perception in the affected eye was able to count fingers at eight feet within a short time after operation; and the improvement has, apparently been permanent.

Seriously, while from the standpoint of the average ophthalmic surgeon who makes operations of such trifling degree as those for strabismus or cataract or even does an occasional emecleation, removal of the superior cervical ganglion of the sympathetic may seem a "serious" procedure (as Hansell and Reber term it)—from the standpoint of the general surgeon, accustomed as he is to the most formidable undertakings, with perfect aseptic details the operation is but a simple, easy and perfectly safe one. When it comes, however, to the procedure necessary for epilepsy and exophthalmic goiter: excision of all three of the ganglia upon first one side of the neck and a week later upon the other, it is indeed more than a simple operation, and should not be attempted by the oc-

*Read before the Mississippi Valley Medical Association, Chicago, October, 1899.

ulist with his usual loose methods of antisepsis. Only the most perfect asepsis can save the patient from danger. But when it is performed by one thoroughly familiar with the surgical anatomy of the neck, and with the same care as that exercised in making an abdominal section, it is practically free from danger.

TECHNIC.

Three methods have been proposed for reaching the superior ganglion: (1) Splitting the sterno-cleido-mastoid near its point of origin, thus coming down directly to the desired spot on the carotid beneath which lies the ganglion; (2) pushing the muscle backward and entering the carotid sheath in front; and (3) pushing the muscle forward, raising the carotid, jugular and pneumogastric—thus reaching the underlying ganglion. The last named is easiest. In either instance the ganglion is seized with forceps, pulled away from the carotid and cut at a point near the second ganglion, drawn down and its upward extension severed as near the base of the skull as possible, and last of all its efferent fibers clipped. The wound is then closed without drainage. As already said, this operation is neither difficult nor dangerous, and can be done within a few minutes by anyone familiar with the anatomy of the neck. It is necessary to operate only upon the affected side usually.

The effects are immediate; and in favorable cases permanent and satisfactory.

EXOPHTHALMIC GOITER.

Hitherto operation for exophthalmic goiter have been limited to thyroid ectomy—with other than thoroughly satisfactory results; and ligation of the thyroid arteries—not yet demonstrated to be of permanent value.

M. Allen Starr, of New York, collected details (Gould's Year-Book, 1899) of 190 operations for this disease, in which removal of the enlarged thyroid was followed by cure in seventy-four cases, forty-five were relieved of the most distressing symptoms, three were unrelieved, and thirty-three died—a mortality of more than 17%; of which it may be said that an operation which is attended with a mortality of 17%, with a prospect of curing less than 40% is hardly an ideal one, and scarcely to be recommended. Jonnesco, commenting upon Starr's report, claims that most of the successful cases (treated by thyroidectomy) were not true exophthalmic goiter, whereas in the typical cases the mortality was really much higher than the figures given—an argument which appeals strongly to any surgeon who has had much experience in removal of the thyroid: thyroidectomy being an operation of serious magnitude, even with a patient who has not the tremendous cardiac disturbance of Basedoin's disease.

If, therefore, an operation can be devised which is equally, or more, efficacious, and in skilled hands devoid of danger, a great advance will have been made in the surgical treatment of this grave disease. Ligation of the thyroid arteries was suggested by Kocher, of Bern, as a substitute for the grave thyroidectomy, and has been considerably experimented with. At the Paris Surgical Congress two years ago Kocher reported thirty-four cases operated upon and Rydygier twenty-two. Of Kocher's patients thirty-one were relieved—or even cured—and three died, from the disease and not from operation; of Rydygier's twenty were cured or greatly relieved and two were wholly unrelieved. This is certainly a far better showing than from the much more dangerous (in this disease) thyroidectomy; and goes far toward establishing the theory as to the cause of the circulatory and other disturbance, upon which removal of the glands is advocated; viz.: an excess of thyroid secretion in the circulation. Removal of the thyroid glands causes, of course, cessation of the secretion of the peculiar liquid and is sometimes followed by mysadematous symptoms which demand the more or less continuous administration of thyroid extract—the exact equilibrium being occasionally hard to establish. If, then, Kocher's operation (ligation of the thyroid arteries) will cause a permanent atrophy of the gland and consequent diminution of its secretion, it follows naturally that it is the ideal operation for exophthalmic goiter, granting this disease to be dependent upon the cause just mentioned; but, unfortunately, this point has not yet been determined, and therefore Kocher's treatment—like other methods—must still be regarded as purely experimental—with clinical evidences thus far greatly in its favor, so far as concerns the cardiac symptoms at least.

But a number of investigators along the line of surgical cure of this peculiar affliction have been struck with the necessity of doing something which would relieve the ocular symptoms as well as the cardiac; and excision or resection of the cervical sympathetic seemed to best meet the indications. Quite a number of patients have been operated on—with varying results. Faure, of Paris (Gould's Year-book, 1899) has excised the cervical ganglia of the sympathetic in three cases, with one death, and advises bilateral removal with a delay of a few days between operations. Jonnesco (Ibid.) reported three cases of simple resection of the cervical sympathetic, all successful; partial excision twelve times—with eleven relieved and one not benefitted. Gerard, Marchand and Abadie (Presse Medicale, July 3, 1897) also report a case in which operation was not followed by any disagreeable symptoms, though there was marked dilatation of both pupils; at the end of ten days the patient could close both eyes, there being such diminution in the protrusion of the eyeballs. They claim that the explanation of relief from thyroidectomy is not the lessening of the thyroid secre-

tion but the disarrangement of the cervical sympathetic during the manipulation necessary to effect the removal of the gland; this theory being that the symptoms found in exophthalmic goiter are dependent upon excitation of vaso-dilators of the cervical sympathetic, so that removal of the ganglia, doing away with this, effects a cure. Whether or not this is the true explanation of the peculiar phenomena of this disease, the operation is worthy of further trial, judging from clinical evidence thus far presented. In Dr. Witherspoon's case, operated upon some two weeks ago, there has been quite a decided improvement.

TECHNIC.

After thorough preparation an incision is made from the tip of the mastoid to the acromion, and the sterno-cleido-mastoid muscle quickly exposed, the external jugular being ligated and cut. The upper part of the sterno-cleido-mastoid may have to be split. The great vessels and pneumogastric are then exposed by blunt dissection, and when thoroughly bared are lifted upward and forward, and the upper ganglion searched for. When found it is to be carefully dissected out without rupture of the connecting filaments with the middle ganglion as these must be the guide to the middle and lower ganglia. At this point the efferent nerves must be cut; they are the filaments which go to the eye.

The upper ganglion having been liberated, the sympathetic tract is followed downward to the little enlargement called the middle ganglion. There is really no cause for removal of this ganglion, as it is in no way connected with the pathology of the disease—it is merely a matter of convenience in reaching the lower, and in this disease, the most important, ganglion. Some difficulty is experienced in locating and removing this, as it often lies in part behind and below the outer end of the clavicle. It is, when dissected loose, removed with scissors and the wound packed firmly with gauze to control oozing, which is not serious. When all oozing is checked the great vessels are allowed to fall into place, and the deep fascia sutured with catgut—great care being exercised that no "dead spaces" are left as possible foci of infection. About two other rows of sutures are needed to perfectly close the wound. The cut in the skin may be closed as best suits the operator; I prefer chromicised catgut. The entire head, chest and neck are then enveloped in subleinate gauze, cotton and starch bandages—the probability of infection being great unless the most extreme care is taken in applying the dressings. With children (in the same operation for epilepsy), in addition to the starched crinoline dressing of the wounded parts I would advise the application of a small amount of plaster of Paris bandage, around each elbow, so the fingers cannot possibly be brought to the wound.

The dressings are allowed to remain six to ten days: until operation on the opposite side.

Some European operators have advised operation upon both sides at the same time. I do not believe it is proper, especially in goiter where the heart is so disturbed that prolonged anesthesia must be highly dangerous; and in an operation which from its peculiar character so profoundly affects cardiac action.

If performed under ideal asepsis there is absolutely no pain following the procedure, and the discomfort of the stiff dressing and recumbent posture is not sufficient to cause the patient to reject the second operation.

EPILEPSY.

It is in epilepsy, however, that this operation will have its evident field of application, if further experiments bear out present indications. For long, it has been held, by some, that in epilepsy there is a constant excitation of the vaso-dilators of the cervical sympathetic, resulting in a chronic irritability of the brain; and upon this theory a number of patients were some years ago subjected to simple section of the cervical sympathetic—with a marked improvement in most instances but with almost universal return, gradually, from restoration of the nerve fibers as we may presume; so that instead of simple section of the nerves complete removal of the entire chain of ganglia upon each side of the neck is now practiced—with what appears to be permanent and satisfactory result in some cases.

It must be admitted, however, that too few operations have yet been made in this disease, and too short a time has elapsed since most of them have been performed, to allow more to be said than that results thus far obtained are sufficiently encouraging to warrant further trial; but enough experimentation has been made to justify formation of certain conclusions; thus:

1. Every case must be an experiment unto itself. No man can say in advance that a certain patient will or will not be benefitted by operation.

2. The results are not dependent upon the degree of susceptibility of the patient (as is too often the case with other operations for epilepsy) but upon the marked changes which take place in the cerebral circulation.

3. Cases of more than four years' duration cannot be promised any hope of improvement, as results have thus far been negative in all such cases experimented with.

4. Of cases recently developed: a few are cured; others are improved; many unchanged.

But, as already declared, enough improvement has been noted to warrant further experimentation. I believe, though, that it should be thoroughly explained to any patient (or his friends) that the work is purely experimental and that nothing can be definitely promised save

that he will not be made worse, which is true. If, in the face of these explanations, the patient is willing to submit to operation it is justifiable.

None of the patients operated upon in this country have passed the period when it may be said that a cure has been effected, as at least two years must elapse after the last paroxism before the patient can be said to be well. The internal treatment which has been found to be most efficacious in each particular case should be continued during this period of two years' waiting.

Unfortunately, not many patients will submit to operation after full explanations are made, as just suggested—most epileptics have been "fooled" too often by charlatans and others who "work" these unfortunates for all they are worth and thereby render them suspicious of the motive of every true investigator. A few have had the courage to undergo the ordeal of what to them appears a severe operation and which necessitates remaining in hospital for a period of two weeks if all goes well. But while without danger, occasional complications arise, of gravest import. Thus, in one of my operations marked symptoms followed removal of the ganglia of the left side (those of the right having been previously excised)—similar to those observed by Radocanche (London Lancet, Oct. 9, 1897) following removal of the thyroid; viz.: restlessness, rapid pulse and accelerated respiration, increased mental activity, etc.—giving rise to the suspicion that Marchand and Abadie are right in their supposition that the good results obtained from thyroidectomy in exophthalmic goiter (just alluded to) are due in great part to unintended interference with the cervical sympathetic. In my case—a woman of thirty, epileptic six years—during exterpation of the inferior ganglion the vertebral artery was accidentally torn at a point so near its origin as to necessitate ligation of the subclavian. There was unusual shock following the operation, with temperature of 96°, pulse above 110 and respiration 30; twenty-two hours after operation she had a violent epileptic seizure, followed by so complete collapse that for two days we feared she would die: pulse more than 150, respiration above 40, temperature 97 or less, much restlessness not controlled by morphine and atropine until heroic doses were given. She gradually rallied, the pulse and respiration became normal and temperature ran to 99½ on the fourth day—followed by uneventful convalescence, the only symptoms of note being the unequal dilatation of the pupils.

In conclusion I can but say: this is only a preliminary, fragmentary report, which I hope to supplement next year by a full record, including details of all my cases operated upon. I now have two cases of exophthalmic goiter and seventy-two of epilepsy under advisement—many of which I expect to be able to report upon at our next meting. But however unsatisfactory this paper may be, I hope it may attract sufficient attention that others may be induced totry the method in these diseases which have thus far too often proven incurable by either medical or surgical measures.

*CHOLELITHIASIS OR GALL STONES.

By R. E. Cutts, M. D., Minneapolis.

This subject was chosen for a brief paper tonight, not because the writer expects to throw any new light upon the subject, but because it is a disease too frequently overlooked.

For a complete description of the subject the writer would refer you to the excellent article in Osler's Practice of Medicine. So we will not waste valuable time by relating what is better given in some modern work on medicine or surgery, but let us bring out points needing emphasis and draw conclusions from the cases reported.

Within the last year I have treated, in my private practice, six cases of gall bladder disease, five of which were gall stones which had been treated by competent physicians, and in no case had the disease been previously diagnosticated.

On three of these cases I performed laparotomy, two of which had gall stones, the third malignancy, involving the stomach and gall bladder. The other three have not yet consented to operative interference.

Cholelithiasis, like appendicitis ten years ago, is too frequently considered some other disease. Because the patient does not have jaundice is no reason why he may not have gall stones. No doubt most cases have several attacks of biliary colic before icterus is manifest. And why is this so? In the first place, when the stones are beginning to form some are apt to be passed which are just large enough to slightly occlude the cystic duct, thus causing an attack of colic, but as soon as the gravel reaches the common duct the calibre is so much greater, no obstruction is experienced, and the gravel passes readily on into the intestine. Hence no hindrance to the flow of bile and therefore no jaundice. It is not until the stone has become so large as to obstruct the common duct that jaundice is produced.

Then again, the stones in their development may not have become engaged in the cystic duct until they have reached the size of a marble or greater, and then become pinched in the neck of the gall bladder, which will produce colic, but the stone may be dislodged by the relaxation due to vomiting or a hypodermic of morphia, allowing the stone to fall back into the fundus of the bladder. Probably most attacks of colic are produced by one or the other of these two conditions and neither produces icterus.

*Presented at the meeting of the Hennepin County Medical Society, November 16, 1899.

Case 1.—Mrs. C. Aet 40—large fleshy Russian Jew woman—has had several children. Previous health good until about two years ago, when had first slight attack of pain in region of stomach and right hypochondrium. Attacks recurred at intervals of a few months. Had been treated by several physicians for dyspepsia.

Patient had so thick an abdominal wall that palpation of the gall bladder was impossible, however the point of most marked tenderness was immediately over this region. Previous history and the character of the attacks pointed directly to the gall bladder as the seat of the trouble. Operation was refused and patient has since been lost sight of.

Case 2.—Mrs. G. D. About 50 years of age —widow—had no home but lived around with her acquaintances. When stopping with a patient of mine I was sent for to see her. She gave a history of having raised several children. Had suffered from dyspepsia with increasing severity for several years—was now somewhat emaciated, the result of the severe pain and the more or less constant vomiting.

She was able to be about, but at intervals during the day she suffered a great deal from pain. A request to loosen her clothes and lie down on the bed in order that palpation might be done, was answered by the remark that of all the doctors she ever had prescribe for her dyspepsia, none had required her to do that, and she did not think there was any need of it. Finally consenting, a large mass could be felt occupying the position of the gall bladder.

The diagnosis made was probable gall bladder packed full of stones, but the possibility of malignancy could not be excluded. I refused to prescribe, as I considered surgical interference the only relief in this case. Nothing more was heard from this patient.

Case 3.—Mrs. S. B. Aet. 44—widow—Had raised family of three children. For four years had had abdominal pain. For last year and half had severe paroxysms of pain at frequent intervals. Although sometimes free for a month or so. These attacks would come regardless of what had been eaten or time of eating, and would last an hour or more. At the same time marked nausea and salivation was experienced but no vomiting. Tenderness was most marked in right hypochondrium and over stomach. The nervous symptoms became quite marked. Medication had no effect on the symptoms—morphine was not tolerated. Examination of the stomach contents after a test meal revealed no free hydrochloric acid. No other positive symptom of cancer could be found, and since the history had extended over so much time malignancy was considered improbable. Herpes Zoster developed along the right intercostal nerves during the winter and continued for about six weeks. Last spring the symptoms became so severe that the patient requested an exploratory laparotomy, which proved the trouble to be cancer of the stomach, head of pancreas and gall bladder. Death followed in about six weeks.

Case 4.—Mrs. M. Aet. 41—Has one child a little more than a year old—previous health fair, although never very robust. After birth of child patient suffered considerably from dyspepsia but had no severe pain. Had been doing a heavy day's work, after which severe pain developed in right side in region of kidney. She rubbed the side with some liniment and applied hot fomentations without effect. On the second day a physician was called in who prescribed for her pain with instructions to call at his office if she was not better in a day or two. I saw the patient on the fifth day of the attack and found a tumor extending from the liver down over the region of the appendix, with history of pain, beginning on the right side and all of the pain referred to the region of the kidney. The tumor was quite freely movable and appeared to be concave on the inner surface—was only slightly tender to the touch. Temperature 100 and pulse considerably increased. A differential diagnosis between movable kidney, appendicitis, and gall bladder disease had to be made. The patient was prepared for operation the seventh day after beginning of symptoms and under anæsthesia the diagnosis of gall stones was readily made.

The abdomen was opened in the customary location and the liver was found drawn down at least two inches below the ribs. This had to be forced up and the bladder raised into position. It was so distended with mucous that it was impossible to palpate anything within. Upon opening the bladder it was found full of mucous and way down in the neck of the bladder were found the two larger stones which you see here. In suturing the bladder to the peritoneum and fascia the fine silk that was intended for use proved rotten, so a heavier silk had to be used.

One peculiar feature of this case was the non-appearance of bile from the wound and the slowness with which it healed. The fistula remained open nearly six months discharging mucous and pus, but no bile appeared until just before the fistula closed and then only a slight amount. I had begun to think the cystic duct permanently closed and was considering the advisability of cholecystectomy. Silk sutures kept coming away occasionally and am not sure now whether it was the sutures or the closure of the cystic duct that kept the fistula open so long. Although the fistula kept open, the patient had no inconvenience aside from the constantly discharging sinus. The sinus has been completely and finally closed for four weeks now, with no formation of tumor, showing conclusively that the cystic duct is patulous.

Case 5.—Mrs. B. Aet. 38—colored—married —three children—always had severe time at childbirth, due to contracted pelvis. General health good, with exception of having had attacks of pain under right ribs, once or twice a

year for last five years. Her family physician had told her it was pleurisy, and she had found that hot fomentations always relieved it in an hour or so.

The pains were always severe and colicky in nature, always producing nausea and vomiting. Last July I saw her in one of the attacks. A hypodermic of morphia was sufficient to relieve her of the attack. I explained the condition then and advised operation. Three weeks later I was again called and found patient in another attack and the bladder could be readily palpated. This attack was also relieved by the use of the hypodermic. The patient went into the hospital a few days later and a lot of sand was washed and scooped out of the gall bladder; some of the largest you see here. The patient went home from the hospital inside of two weeks and within a month the fistula was closed.

Case 6.—Mrs. W. Aet 35—married—three children—youngest four months. Has been troubled with dyspepsia and attacks of pain for two or three years. The attacks were more frequent and severe since last babe was born. Early in September had an attack lasting five days, during which no food could be kept on the stomach. Attack came on suddenly when ironing. About two weeks later another attack came on, but was of short duration. The gall bladder could be distinctly palpated during the attack, but the next morning could not be felt. This patient wanted to go home (state of Washington), to consult her husband before submitting to an operation.

Of these cases not one was ever jaundiced, and the explanation lies in the fact that the obstruction was not in the common duct but in the cystic duct or neck of the bladder. A glance at the cystic and common ducts will aid us in an understanding of the conditions encountered. We find the ducts not only varying in length, in different people, but their lumens also vary greatly. I have seen the lumen of the common duct varying in size from half the size of a slate pencil to that of a lead pencil, while the cystic duct may be so small as to barely admit a pin, or it may be large enough to admit a slate pencil. The common duct is smooth, while the cystic duct is lined with trabeculæ and spiral valves, which greatly interfere with the passage of foreign bodies. Therefore, in case five we find the rough, irregular, dark pinhead sized sands, causing severe pain while passing the cystic duct but no symptoms of occlusion while passing the common duct. We might therefore conclude that the cystic duct in this patient is very small.

The larger stones shown you to-night, removed from case four, never entered the duct and never gave trouble, until one of them impacted in the neck of the bladder. A large hypodermic of morphia in the beginning of the attack would probably have relaxed the muscle enough to have permitted the stone to have fallen back into the fundus. But inflammatory deposit finally bound it so firmly in place that nothing short of surgical relief was possible.

The curative treatment of gall stone disease can only be surgical. Prophylactic treatment may be medicinal, but it is now generally conceded that no known medicine will dissolve the stone already formed. Another point I wish to emphasize is the inability to palpate stone in a greatly distended gall bladder, even when the abdomen is open. With stone or catarrh of the bladder, we usually find the walls thicker and more firm than normal, and this is an indication for opening and draining the bladder. With such fine sand as found in one of these cases, one can readily see the inability of the operator to palpate them even in a collapsed condition of the bladder.

All these cases were in women having borne children. Statistics show that 90% of women with gall-stones have borne children. This may possibly be due to the disturbance in digestion, the increased tendency to catarrhal trouble of the gastro-duodenal mucous membrane, the more sluggish condition of the organs due to the inactivity of the pregnant woman, the hindrance to the portal circulation due to the pressure of the enlarged uterus,—and last but not least the relaxation of the abdominal walls after delivery, permitting the fundus of the gall bladder to drop lower and so making the angle at the junction of the neck of the bladder and the cystic duct more acute, thus preventing the free emptying of the bladder contents.

AMPUTATION OF THE FALLOPIAN TUBES.

Dr. George Ben Johnson says that the uterine tubes should be amputated in:

Extrauterine pregnancy, whether ruptured or unruptured, if the tube is much enlarged and altered.

In kinks and strictures, if these are numerous, decided, and accompanied by dense adhesions, because having established by operation the previousness of the lumen under such conditions, it cannot by any means at our command be maintained, and may be followed by either hydro- or pyosalpinx.

In hydrosalpinx of either the follicular or flowing varieties, for the reason that the naked eye cannot define the limits of the former, and the latter will yield to no other treatment. In simple hydrosalpinx if the tube is greatly distended, its wall much thinned and in the presence of adhesions.

In pyosalpinx in every instance where the infection is other than gonorrheal, and in these if the abscess cavity is large and tube walls much impaired. Indeed, attempt to save a suppurating tube is rarely justifiable.—Richmond Jour. of Prac.

*OBSERVATIONS ON THE SURGERY OF THE BRAIN, BASED ON CLINICAL AND EXPERIMENTAL EVIDENCE.

By George W. Crile, M. D., Cleveland, Ohio.

The experiments were performed according to the methods in vogue in physiologic research. Graphic records of the various phenomena were taken on smoked drums and the statements made may be verified by tracings in my possession. The clinical observations are based on forty-seven operations.

TRAUMATISMS, (EXPERIMENTAL).

Such as blows, compound fractures of the skull, bullet wounds, etc., in almost every instance affected respiration more than circulation. Death was produced in one instance by respiratory failure from the effect of a bullet that did not even touch the brain, but passed very close to the medulla. The effect upon the circulation varied greatly, sometimes slowing, sometimes acceleration, sometimes irregular action. The most important first aid indication in many cases would be for artificial respiration. A case of a gunshot wound in the navy in the Spanish-American war died of respiratory failure, the beating going on for some minutes.

INCREASED INTRACRANIAL PRESSURE.

Symptoms of pressure do not usually appear until the brain has been compressed 5 per cent. of its volume. (Experiments on dogs.) The pulse is slowed sometimes to more than half its normal rate. Irregularity of rhythm may early develop. If the pressure be continued long, the cardio-inhibitory mechanism becomes exhausted and there is rapid, alternating with slow, heart action. The vaso-motor centre is early affected and is readily exhausted. Great irregularity in the rapidity of the heart's beats foreshadows dissolution of the cardiac centres and death. Respiration was in almost every experiment affected in advance of the circulation. The active phase of the expiratory act was first affected, then the inspiratory. The respiratory centre showed itself to be more sensative than the cardiac and indicated earlier pathological pressure. When the brain is under pressure the amount of anæsthesia is proportionately less. Sudden respiratory failure is likely to occur and an assistant should be detailed to administer artificial respiration, while the operator opens and cuts away the skull with as much dispatch as is consistent with safety to relieve the pathological pressure. Natural respiratory action is usually inaugurated as soon as the brain is relieved if its abnormal pressure.

Clinical observations support the experimental, that operations performed in the presence of sudden alternating rate of heart action with irregular rhythm are extremely unpromising. This state foreshadows breakdown of the centres and death.

THE COMPRESSIBILITY AND ELASTICITY OF THE BRAIN.

Experiments show that brain substance is practically incompressible, but that it has a considerable elasticity. The elasticity is a property of the brain tissue itself which is but slightly modified by change in the blood pressure. The elastic recoil, however, is modified by blood pressure. In elevation of depressed fractures, evacuation of blood clots, abscesses, etc., the elastic recoil is clinically observed.

ON THE CEREBELLUM.

On immediate lesion of the cerebellum, remarkable compensation takes place. Animals may live after the ablation of the entire cerebellum. The absence of clinical symptoms, in the slow development of tumors or abscesses, is due to the compensation that takes place pari-passu with the development of the morbid process. Experiments show that when one lateral lobe of the cerebellum is removed there is a strabismus, such that the opposite eye is directed downward and outward, while the other eye is little, if at all, deviated; there is a nystagmus, such that the jerks of both globes are directed toward the side of the lesion; there are motor phenomena, consisting in partial or complete paralysis of the limbs of same side as lesion, and increase in the muscular rigidity of the same side; there is an incoordination, such that there is reeling and rotation toward the opposite side from the lesion; there are sensory phenomena, including blunting of sensibility on the same side as lesion; and the reflexes are greatly increased on same side as lesion. The differences and confusions existing among clinicians and experimenters, regarding cerebellar phenomena, may be greatly due to the fact that the observers do not adopt the same rule in describing such symptoms, as reeling and falling to the right or to the left, as to whether it applies to the observer or the observed.

I have been able to verify in three different instances the deviations of the eye while performing operations and while making explorations to search for tumors. In none of these cases were any effects noted upon the eye after the actual irritation, caused by exploration, had been done. The cerebellum is a safe field for explorations. Experimental evidence proves that this organ does not act as a whole, but that its halves, if divided mesially, perform their functions equally well. While the cerebellum has a crossed action on the brain, it has a direct action on the spinal cord.

In performing the forty-seven operations on the brain, upon which the clinical observa-

*Original abstract of a paper read at the meeting of the Mississippi Valley Medical Association held in Chicago, October 3 to 6, 1899.

tions of this paper are based, I have used the trephine and the chisel each in a considerable number of cases and give unqualified preference to the chisel. Preference is given to the Horsely bone forceps for further operation on removing of the skull. The use of 10 per cent solution of olive oil and bees' wax, sterilized, to control the hemorrhage from the diploe, has proved most satisfactory. The wax is pressed into the bleeding surface and allowed to remain. A case of bullet wound, taking effect upon the third tempero-sphenoidal lobe, cutting away a definite portion of brain was reported. The location of the lesion was at Reid's base line, the posterior border of the wound being in a vertical line above the anterior border of the external auditory meatus. The only symptom was the loss of ability to speak common names, in other words, the so-called "name centre" was destroyed. This case is to be later reported in detail.

The experimental work upon which these operations were based include a long series of experiments, part of which have been published, and the remainder are to be published in detail in later papers.

*TYPHOID FEVER IN VERY YOUNG CHILDREN, WITH REPORT OF THREE CASES WITH UNUSUAL COMPLICATIONS.

By E. B. Montgomery, M. D., Quincy, Ill.

After an extensive review of the literature pertaining to typhoid fever as occurring in infancy and childhood, including a mention of Dr. Stowell's tabulation of eighty-five cases under three years of age, the author proceeds to detail three cases, two of which happened in his own practice.

In the first case, an infant of nine months, the meningeal symptoms were so marked as, for a time, to make a diagnosis of tubercular meningitis highly probable. These symptoms began to subside about the twenty-third day of the fever, and convalescence was fairly established by the thirty-fifth day.

The second patient, a little girl of three and a half years, suffered from the development of double suppurative parotitis about the twenty-fifth day of the fever, and aphasia from an earlier period. The fever persisted for some time after the evacuation and drainage of both abscesses, but convalescence was finally fairly established about the forty-fourth day from the onset of the illness. The literature pertaining to meningitis and parotitis, as complications of typhoid fever, is considered and many statistics, showing their comparative infrequency, given.

The third case, an unreported case of Dr. C. W. Rook of Quincy, Ill., occurred in a boy of three years, and was unusual in the development of swelling of submaxillary glands of one side on the seventeenth day of the fever. Later, this suppurated, and the pus was evacuated, and one week following a parotid abscess formed, resulting in death of the patient on the thirty-third day ofthe illness. The author, in an extensive search of the literature pertaining to typhoid fever, its complications and sequels, was unable to find but three other cases detailed in which the submaxillaries became involved in the course of the disease.

*THE ASSOCIATION OF HYSTERIA WITH ORGANIC DISEASE OF THE NERVOUS SYSTEM.

By Philip Zenner, A. M., M. D., Cincinnati.
Lecturer on Diseases of the Nervous System in the Medical College of Ohio.

The diagnosis of disease is the most difficult and, at the same time, the most important function of the physician. This is nowhere more apparent than in hysteria, a disease which may simulate almost any other and where mistaken diagnosis may not only bring opprobium upon the physician but also do much mental and bodily harm to the patient.

The object of this paper is to call attention to the association of hysteria with organic disease of the nervous system, a not very rare occurrence, which enhances the difficulties of diagnosis, not the less so that the fact of such association is too frequently not borne in mind by the practitioner.

The most important factor in etiology of hysteria is heredity, though hysteria does occur without a neurotic history, and, apparently, even without the patients having formerly acquired a neurotic disposition. Among the not infrequent causes may be mentioned alcohol, syphilis, fevers and other debilitating conditions, trauma, shock, and the depressing emotions. It is well to note that the same causes frequently produce organic diseases of the nervous system. At the same time organic disease of the nervous system itself not infrequently causes hysteria. There are two factors that are especially effective here, fright or other painful emotional state that the actual disease evokes, and suggestion, the mental effect of present and anticipated symptoms.

The essayist here reported two cases of locomotor ataxia, in one of which the sudden information that he had a grave disease brought on a distinctly hysterical mental state, only removed by encouragement, and a modified rest treatment; in the other, attacks of astasia-

* Original abstract of a paper read at the meeting of the Mississippi Valley Medical Association, held in Chicago, October 3 to 6, 1899.

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abasia of hysterical character occurred, and were removed by suggestive therapy.

Apart from this fact of a sometimes common etiology, and, therefore, coincidence of hysteria and organic disease of the nervous system, the latter may appear in old hysterics, for hysteria is no security against such a development. In such instances the physician is often caught napping, for, not only are the hysterical manifestations likely to mask those of a graver disease, but the practitioner is usually not on the alert for the appearance of the latter. I will add a few illustrative cases.

The first, a lady having had hysteria for years, was seized with slowly developing hemiplegia, which the autopsy showed to be due to acute cerebral softening, but which was at first diagnosed hysteria. The other, also a lady, had had hysterical symptoms many years, but had been decidedly worse for a year before the writer saw her, without any other diagnosis being made. An examination showed the presence of Bright's disease, of which the patient died shortly thereafter.

The diagnosis in such instances may become a very perplexing problem. It is often sufficiently so in hysteria, which may simulate nearly every disease. As an instance I may state I have seen meningitis taken for hysteria, and hysteria taken for meningitis, and that, too, by good men. Nor is the diagnosis any easier that the hysterical symptoms are likely to be manifested in a part where there is already actual disease; in a joint that has been injured or where there is a slight inflammation, in a larynx, where there is a mild catarrah, and the like.

In the diagnosis we will be assisted by noting: firstly, the personality of the patient, age, sex, heredity, disposition, and history; secondly, the relation of symptoms to emotional conditions, for hysteria, or, at least, some of its manifestations may appear at once from fright, or other strong emotion; and subsequent symptoms may be influenced by like conditions; and, thirdly, the clinical picture presented. The most characteristic clinical features of hysteria are the hysterical temperament—in the lighter cases the chief condition presented—the stigmata of the disease—anæsthesia, paralysis, contractures, limitations of the visual fields, hysterogenic zones, etc., etc.,—and the crises which vary all the way from severe hystero-epileptic attacks to more emotional storms. The diagnosis is sometimes helped by the peculiar grouping of symptoms, paralysis, etc., such, as it would appear, organic disease could not produce, or, by rapid fluctuations in symptoms, their sudden appearance and disappearance, etc. Finally the marked influence or mental impressions, the power of suggestion over the manifestations of hysteria may throw a bright light on the nature of the disease.

There are some special symptoms that have a great diagnostic import, for instance, the *globus*, and concentric contraction of the fields of vision, for hysteria; and hemianopsia, alteration of the deep reflexes, rigid pupils, and the reaction of degeneration for organic nervous disease. Yet even these symptoms are not altogether pathognomonic, the first mentioned not at all, and hemianopsia, ankle clonus, and rigid pupils have been found in hysteria.

The various diagnostic tests mentioned are not always found, nor are any of them invariably reliable. No wonder, therefore, that the most experienced and skillful diagnosticians have been led into error. The greatest safety lies in always bearing in mind that diagnosis is often difficult, that hysteria and organic disease may be present at the same time, and in a painstaking examination and careful observation of the case.

The importance of a correct diagnosis is often very great. We would avoid the opprobrium of calling organic disease hysteria. On the other hand, we should not doom a case of hysteria by pronouncing it to be organic disease, a doom not only in name, but whose utterance may do untold harm to the patient. It is sometimes equally important that we should recognize the presence of each malady when both are present, especially because of the amenability of the functional disease to treatment. Not rarely, so far as the immediate condition of the patient is concerned, the functional trouble is the more important, and we have already seen that its appearance with organic disease is largely due to mental impressions, fright and suggestion. Hence the powers of the physician in combatting it, by allaying fears, guarding against the ill effects of auto-suggestion incident to the organic disease, and inspiring the patient with new hope and courage. Here, as everywhere in the treatment of hysteria, awakening hope and cheer, and suggestive therapy are the most powerful curative measures.

EMPYEMA OF THE GALL BLADDER.

To sum up, in a general way, the chief symptoms leading to the diagnosis of empyema of the gall bladder are:

1. Pain, and acute symptoms of inflammation, in the gall bladder region (muscular rigidity, pain on pressure, etc.).
2. Fever, chills, sweating.
3. The presence of a tumor.
4. Probably there will be a history of cholelithiasis.

Suppurative inflammations of the right kidney and also of the vermiform appendix when displaced must be excluded.

The treatment is surgical, and consists in incision and drainage of the gall bladder. It is usually wise to aspirate gall bladder before incising it. It is not necessary, neither is it always practicable, to suture a gall bladder in-

to the abdominal wound. Gauze packing will often suffice to protect the abdominal cavity against contamination, before aspiration and incision; likewise after the establishment of drainage.—Virginia Medical Semi-Monthly.

DEATH IN CONSEQUENCE OF PROLONGED LAUGHTER.

Wachholz (Przeglad lekarski) relates the case of a peasant girl, 18 years old, who was seized in a field by two fellows and tickled violently on the breast. She died as a result of laughter produced by the tickling. The author explains the occurrence of death from laughing as follows: Laughter consists of an inspiration followed by short and more or less deep expirations. In forcible expiration the abdominal muscles contract and compress the intestines and the diaphragm. Long-continued pressure on the diaphragm acts upon the vagus and diaphragmatic nerves, exciting them and finally paralyzing them. We are not convinced that this is an altogether satisfactory explanation. Certainly the mechanism of death from laughing, if it ever occurs in a healthy person, is worthy to be studied by the physiologists.—N. Y. Med. Jour.

ON OSTEOPLASTIC SURGERY IN SERIOUS COMPOUND FRACTURES.

By Thomas H. Manley, M.D., New York City.

Perhaps at the present time there is no branch of surgery so much neglected as the treatment of fractures. Old-time traditions must go by the wall; the amputating knife may be twisted into a sickle or sold for junk, as it no longer has any place in severing a traumatized limb, until at least we know that more or less of it is beyond resuscitation.

Thus-and-so's splint must go, too, for kindling wood, unless we assure ourselves that some retentive apparatus is necessary. For example: Recently a young man came under my care with his forearm finely splinted and begged for some other appliance less painful. On examination I found a fracture through the head of the right radius without displacement. I directed that everything be cut away and that he carry the splinted arm in a sling. It was further directed that elbow and free wrist motion to be made every day. In ten days we had solid union with no stiffness, no deformity, nor neuralgia. Had we only kept the firm sprinting on, and more or less hampered the circulation, six weeks would have been required for union, with a stiff and painful limb, at that.

A few days ago, as I was about to take in hand a leg badly smashed by a railroad accident, the house surgeon ventured to inquire if I proposed to "do a Gœters amputation at the knee joint."

The young gentleman was rather chagrined when I informed him that I did not propose to do an amputation of any kind, as the car wheels had already torn the limb in two; that I would content myself with clearing away the shreds affecting complete hæmostasis, thoroughly cleansing the parts and embalming them. I would then wait with the hope that it might be possible to spare him three or four inches of his leg below the knee, and leave that entire.

We are not aware of the fact that antiseptics have opened up a new and vast field in osteoplastic surgery; that provided only the blood stream is intact, by skillful manipulation of bone fragments we can accomplish the most remarkable feats of repairing shattered limbs. The conscientious practitioner must take advantage of this art and now spare where he formerly sacrificed. To amputate limbs which might be spared is a criminal blunder. Away, then, with the pernicious teachings of the past, and let our guiding principle be spare, preserve, and reconstruct; let us not waste a moment in thoughts on "a circular, an oval, or a square flap," but rather let the flap be formed by nature's dividing line. We have no use now for the "ten or thirty second amputator." Such feats are worthy only of dime museums, and not of scientific practitioners.

PREVENTION OF PREMATURE OLD AGE.

This is discussed by Hermann Weber. Early senility of the nervous system is due chiefly to cardiac and arterial degeneration, and is seen chiefly in the male sex. Its prophylaxis is to be sought in bodily and mental activity and moderation in living. It is very often hereditary, and in such cases treatment should be commenced early in life, about the twentieth year. Habitual moderation in eating and drinking should be enjoined, with a fair amount of athletic exercise in the open air, taken regularly and systematically. If possible, one whole day weekly should be spent in the open air, but fatigue should be avoided. Great moderation in eating and in the use of alcohol is especially necessary. Excess in tobacco and in the sexual functions should be avoided. The hours spent in sleep should not exceed eight out of the twenty-four, and after fifty years of age five or six hours are enough. Early rising conserves the intellectual energy. It is especialy important to maintain a good flow of spirits and to avoid habitual ennui, low spirits, or depressing emotions. The absence of occupation, such as follows retiral from business, often precipitates the changes inevitable to old age. Hence, in every case, some "hobby" should be indulged.—Edinburgh Medical Journal.

GRANULOMA FUNGOIDES.

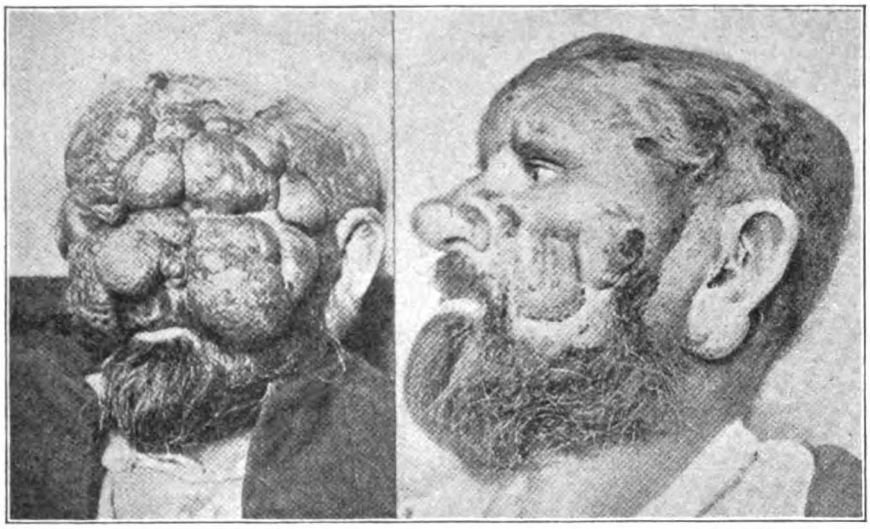
(D. C. M'Vail, M. D., Glasgow Hospital Reports.)

A man aged 43 was admitted to the hospital in July, 1897. In June, 1896, a sheep he was shearing kicked him on the right temporal region. The skin was not apparently broken, but within ten minutes a "raised bruise" the size of a sixpence appeared. It was not painful and was freely movable. At the end of the month it was increased to the size of a shilling, and a dusky red blotch the size of a three penny-piece was observed on the left upper arm three inches above the condyle. This was not inflamed, and at first did not project above the level of the surrounding skin. A fortnight later there was a projection on the vertex of the head, and after a week another appeared over the left parietal bone. In February, 1897, the latter began to extend backwards to the occipital region and to project much more. New swellings appeared on the frontal region and on the eyelids. In April the parietal swellings had become as large as half an orange. The left illustration in the cut accompanying this report shows the condition of the head and face on admission to the hospital. The color of the growths generally was dusky red. Those on the coronal region were somewhat excoriated and bled slightly. The swellings were entirely under the skin and movable with it. Over the arms were scattered irregular masculæ and tubercles, varying in size from a lantel to a bean, and on each upper arm there was a much larger projection. Over the surface of the body there were small elevations, more numerous on the anterior surface; those on the thighs and legs were from the size of a three penny-piece to that of a florin. The lungs, heart, liver and spleen were normal. The inguinal, axillary and cervical glands were slightly enlarged. There was no history of syphilis.

Microscopically the growths consisted of round, and some spindle, cells, with thin-walled vessels. A new bacillus was found in the growths. Experiments were made with rabbits, and intraperitoneal injections caused death in forty-eight hours, with localized peritonitis and enlargement of the surrounding glands: the bacillus was found in the enlarged glands.

Iodide of potassium and chaulmoogra oil were given. The patient's condition remained unchanged until July 21, when the temperature rose to 100°. On the 28th it reached 105.6°. By the 27th, the swellings had gradually diminished in size, and they were less dusky red. The right-hand picture shows the condition of the head and face at this time.

On July 31st the temperature was normal, and so continued. With the fall in temperature the patient's mind became clear. The iodide of potassium was persevered with, but the oil was discontinued.



A Case of Granuloma Fungoides.

Throughout August his health remained good and the growths did not increase, but in September they began to enlarge. He became extremely emaciated and anæmic, and died from exhaustion in December.—Medical Review, London, September, 1899.

EUCALYPTUS TREES AS ANTI-MALARIAL AGENTS.

Eucalyptus trees are to be planted in Cuba as an anti-malarial agent. These trees have done much good in Italy, in Rome, and in Mexico, the death-rate falling off materialy in these places after their introduction.—New Orleans Medical and Surgical Journal.

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DECEMBER, 1899.

A PROTEST AGAINST CUTTING THE PINE TREES AROUND WALKER.

The great value of the coniferous forests in the northern part of this state is now well known by the profession for their health-giving and restoring properties, and in recent years a rapidly increasing number of invalids are being sent thither by the physicians of this and other states. And while there are other locations available in a measure for the purpose, one in particular is preëminent, not alone for the great charm of the scenery, which is diversified, picturesque and beautiful in the highest degree, but which seems especially beneficial as a health resort, beyond any other locality. This is the now well-known Leech Lake region, although only a few years ago it was an unknown wilderness remote from all easy avenues of approach. Two railroads now reach the southwest extremity of the lake. The little town of Walker nestles on the shore at this point, set directly in the dense green of a fine forest of young Norway and white pine timber. Only a few miles of shore line, extending above and below the town are outside the Indian reservations, and, therefore, the only portion of this peerless body of water that is open to approach and use for the general public and the seeker after health.

A distinct calamity now threatens this region as a health resort for the patients for whom it has been found such a boon. The owners of the timber skirting the shore all about and behind the town are preparing to cut it all out this winter. This will leave the shore largely a barren waste of sandy hills, shorn of all their value for health, for beauty and for pleasure. This matter concerns the profession vitally, as it does the community at large. For not only are pulmonary conditions greatly benefitted there, but it is also proving of great value in a wide variety of diseases, including gastric disturbances, neurasthenic states, general debility and convalescence from severe diseases and surgical operations. The most active interest and influence of the profession should be put forth immediately to help prevent if possible the destruction of this beautiful region as a health resort, which it is certain to become if the pine forests there can be spared from the ruthless axe of the lumberman.

LEO M. CRAFTS, B.L., M.D.

THE EFFECTS OF NATIONAL PARKS UPON BUSINESS AND POPULATION.

Through the courtesy of General C. C. Andrews, Chief (Forest) Fire Warden of Minnesota, we are favored with a copy of a letter from Colonel William F. Fox, Superintendent of State Forests of New York, which should dispel the fears of those who believe that the setting apart of the tract of pine lands around Cass and Leech lakes would be undesirable from a business point of view.

According to the State census of 1892 there was a population of 32,017 within the boundaries of the great forest of Northern New York, or in what is termed the Adirondack Park. Since this census was taken the population in some parts of the park has doubled, and in all it has greatly increased. The figures embrace permanent residents only, and do not include the very large number of hotel people and tourists who frequent the forests during the summer, nor does it embrace the larger numebr of sportsmen who go to the woods in the spring months to enjoy the fishing, or the hunters who go there in the fall in search of deer or partridges.

Col. Fox, in his letter further adds:

"Of late the fixed or winter population throughout the Adirondacks have become strong advocates of forest preservation. They admit freely that they can make more money out of the summer people, tourists and sportsmen who frequent the forests than they can obtain from the

lumbermen. There are over 1,000 guides in the Adirondacks.

"In the Annual report of the forest Commission for 1893 I published the names and post-office addresses of 788 of these guides. When these men work for the lumbermen they receive $1.00 per day and board. During the spring, summer and fall, while employed as guides, they receive $3.00 per day with board and other expenses. The livelihood of these men and provision for their families depends upon the existence of the forests.

"In further reply to your inquiries I would say that the population of the Adirondack forest is more largely scattered than what the figures given you would indicate. There is little tendency to concentrate in villages. Still, there are several villages which are entirely dependent upon the people who come to the woods for pleasure or health. The village of Saranac Lake contains about 2,200 people. This place is built up largely by wealthy persons who, on account of pulmonary troubles, are obliged to live in the forests. Lake Placid, with a population of about 1,500, is almost entirely composed of hotels and boarding houses. In the summer, it has a population of several thousands. These people do not want any lumbering done near them. There is more money for them in a standing forest than in saw mills and river driving. They would rather see the logs standing in the trees than in piles on the skidways. The villages of Wells, Indian Lake and Long Lake have each a population of from 700 to 900 people, one-half of whom obtain their livelihood by work as guides.

"In the Catskill forests there are several beautiful villages, notably Pine Hills, Tannersville, Palenville, Hunter, Stamford, Margaretville and Fleischmans, with a population of from 800 to 1,200 each. These villages are all dependent upon the summer residents, who throng this region on account of its nearness to New York City; but as the villagers are well aware that if the forests which cover the Catskill Mountains are ever removed or destroyed they will lose the patronage of the summer people and their occupation will be gone.

"Of the many thousands who frequent our Adirondack and Catskill forests each summer a good proportion are from outside states. The large amount of money which these outsiders leave within the state of New York will exceed the millions which the state is paying for the purchase and preservation of its forests."

GOVERNMENT SANATORIA IN NEW MEXICO.

Through the kindness of Dr. Francis Crosson, of Albuquerque, we are able to publish the following interesting items from a local paper of the Territory:

FORT BAYARD SANATORIUM.

The sanatorium for consumptive soldiers established at Fort Bayard, New Mexico, by the United States army medical corps is now in operation, in charge of Dr. Daniel M. Appel. There are three hospital steward's nurses and thirteen assistants. Twenty patients have arrived and more are on the way. Three of the barracks buildings and most of the quarters for the officers are in use. The barracks buildings are of brick, have wide verandas and are being fitted up regardless of expense. An amusement room has billard and card tables and a library with periodicals and newspapers. Seventeen carloads of furniture were sent from the east for the sanatorium. There are accommodations for 100 patients, and next year room will be made for 200 more. The patients are supplied with refrigerated beef from Kansas City, poultry and vegetables from the neighboring ranches. The invalids are required to spend eight hours daily out of doors.

FORT STANTON MARINE HOSPITAL.

The marine hospital at Fort Stanton, Lincoln county, for consumptive sailors from the United States navy, has been made ready, and the El Paso & Northwestern railway company notified that stage connections will be made at Capitan. The railroad management has been asked to use special cars in the transportation of inmates. The patients will report in El Paso to Dr. Alexander, government quarantine officer, and will be by him put in charge of the railway officials. Every attention will be given them in transit to Capitan, from which point they will cover the remaining six miles to the fort by stage.

The sanatorium authorities will be unable to find room for the great number of patients expected. It was intended that 1,000 men should betreated, but the fact that the appropriation is not forthcoming in full, makes it possible this fall to receive only a limited number. Just how many is meant by a limited number Dr. Cobb, in charge at Fort Stanton, does not say.

The White Oaks road, having as yet no adequate accommodations at Capitan, is making arrangements to fit up stationary box cars there with sufficient cars to provide for the comfort of the expected patients. The train arrives at Capitan in the evening, and the stage to Fort Stanton does not leave until the following morning. Hence the necessity for accommodations at Capitan over night.

REGARDING THE INFECTIOUS DISEASE EPIDEMIC AT APPLETON, MINN.

Dr. B. F. LaRue of Appleton, Minn., had a long communication in a local paper, recently, in which he makes strong objection to calling the outbreak of an infectious disease in his community, small pox, as was done by Dr. Bracken, secretary of the State Board of Health. Dr. LaRue gives his reasons for diagnosing the cases, which nearly all came directly under his care—

or he was cognizant of the symptoms of each—as chicken pox, pure and simple. After going minutely into all the symptoms of each case the Doctor says:

"Dr. Bracken's application of the term "mild type" to this outbreak is very misleading. The public might infer that more than one type or kind of small pox existed, when there is but one type of the disease. One specific germ or poison is the source of all the grades or degrees of this disease. Two grades are generally considered, the discrete and confluent, which has reference only to the number of pustules. The discrete indicates distinct or separated pustules, and the confluent, running together of the pustules. Other terms as semi-confluent are used. The terms malignant and benign refer to the constitutional condition or complication with other diseases. Other symptoms being equal, the more pustules the more severe the grade. A case of either grade might be called a typical case, because the disease small-pox has so many well marked characteristics peculiar only to that disease. But there is positively no "mild type" and as positively no mild grade of small-pox, except that caused by the modification of the number of pustules by vaccination—called varioloid.

Therefore, every case of small-pox unmodified by vaccine is a "typical case," without comparison, the most infectious and contagious disease in the calendar of diseases. No "expert" is required to tell it when well advanced. The greenest doctor on the earth should have several years' hard study at school for not recognizing it promptly. The trouble is, most doctors are too prone to recognize the disease from the early symptoms ushering in the disease, such as a chill, fever, nausea, and that well conned subjective symptom, "backache," and for certain well understood reasons, the disease is afterwards "studied" from a safe and respectful distance. Some doctors could "write a book" on the subject of small-pox, and yet never have the disagreeable and dangerous task of treating a case, nor the still lighter distinction of having seen one through a telescope, or having examined one through a long distance telephone. Having in my eatrly experience passed through this crucial period, I feel justified in an attempt to give the history of a typical case, but space will permit me to give only the objective characteristics, or those which can be learned without consulting the patient.

"1st. The pimply or papular stage, which may or may not be preceded by a rash. 2nd. The vesicular stage, usually very short. The pustular or suppuratory stage. The first or pimply stage has a secondary characteristic—the areola or redness of the skin the size of a dime to a quarter of a dollar. This size cannot be shown on the face when the pimples are very close as in the discrete and confluent grade, but will show on body where the pimples are isolated. The 3rd, or pustular stage has several dependent or secondary characteristics, viz: umbilication or sinking of center pustle, due to absorption of the thin portion of the pustule, secondary fever due to same cause, and intense itching and odor or "mousey smell," also scabbing and pitting. After the scabbing stage is over, the skin is very red for many weeks and the scars are cupped out below the level of the true skin. All this implies depth within the skin, which is true, as it is the deep skin which furnishes the material for a small-pox pimple, afterward converted into a pustule. Now, did Mr. Jenks or any of the ten cases have such a complication of characteristics? I answer no, with all the emphasis which can be given to the English language, and I will prove my statements true beyond a reasonable doubt. A photograph of a genuine case of small-pox of the grade indicated by Mr. Jenks' photograph, would show from the 6th to 10th day several characteristics, namely: pustules, plain and umbilicated in various stages of completion, scabbing and the areola (black in photograph). I challenge Dr. Bracken to prove from Mr. Jenks' picture anything but simple vesicles, with a tendency to cluster even on the face. I offer the testimony of Dr. Rogers and Dr. Norton, as good experts in this specialty as the state affords, that the photograph does not show anything but one kind of simple vesicles, and I invite all professional men, experts in this specialty, to examine the same, who will give evidence that the disease is chickenpox and not smallpox. These are not all the proofs. I offer another test. I have obtained the vaccine pustule in seven out of the eight cases vaccinated, as follows: Ernest Countryman, Ted. Countryman, Gladys Johnston, Juva Jenks, Leonard McGaughey, Mrs. Cooper and baby, the last two vaccinated by Dr. A. K. Norton, Health Officer of Minneapolis. This is positive proof alone, which should be received as conclusive. I offer still another proof—the "sporadic" character of the infection. Out of 400 to 600 direct exposures to the disease, from two families—Mr. Johnson's and Mr. Jenks', just four cases, confined to two families—had the disease, and those not traceable to direct infection. Not one of the known exposures took the disease. The disease was true to type and characteristics, following the laws of chickenpox in every particular, which is described as "a disease essentially of childhood, though it may occur in the adult. It has a vesicular eruption, but one which may become pustular or hemorrhagic. The umbilication which takes place in a few of the lesions must be looked upon as the exception, though the larger ones usually have a central dell or dark depression. Eruption may be said to be vesicular from the start." —(Extracts from Practitioner's Manual, Chas. Warren Allen, M.D.) Is it now a source of wonder that I have persistently (lies to the contrary) called these cases chickenpox? In a letter to Dr. Rogers of Montevideo, Dr. Bracken ex-

pressed "surprise" that "one so intelligent should call the epidemic at Appleton chickenpox." It is not a matter of surprise to me, and should be to no one, that a man of Dr. Bracken's capacity should call this epidemic smallpox, after reading the following extract from his special smallpox circular—"Every one must be on guard against this disease from this time on. Railroad officials should notify their ticket agents, especially at small stations, to be on their guard against selling tickets to persons with suspicious eruptions on the face, or with suspicious histories, unless the suspicious party can bring a certificate from a physician known to the agent to be a reliable man, stating that the party under consideration has neither small pox nor chicken pox. School teachers must be on their guard against receiving scholars with any suspicious eruption or history." If this extract has any meaning whatever, it is to the effect that all responsibility is taken from the local physicians throughout the state, and that ticket agents and school teachers are by his suggestion or appointment the diagnosticians of the future. Dr. Bracken is not supposed to be a railroad man, and certainly has no official jurisdiction over railroad officials and ticket agents, notwithstanding his attempt to "railroad" these cases of chickenpox" over the state as cases of smallpox.

"I do not want the public to get the impression that I feel the least hostility to the State Board of Health. That would be untrue, as I am a friend to all good laws for the preservation of the public health, and wish to coöperate with them for the suppression of infectious diseases. Chickenpox, though infectious cannot or should not be converted into smallpox by special orders from the department of health."

TUBERCULAR PERITONITIS.

Holmes (Annals of Gynecology) concludes:

1. Tubercular peritonitis is a relatively common disease.

2. It is never a primary disease, though it is usually impossible to find the initial focus.

3. Recovery follows laparotomy, as a general rule, unless there is an initial focus to keep up the disease.

4. This disease appears in three different forms—the exudative form, the dry form and the ulcerative form and they are recognizable in the order named.

5. Microscopical examination of the peritoneum is sufficient for a positive diagnosis. The demonstration of microscopical tubercles, or the recognition of the bacilli are only confirmatory.

6. Puncture of the abdominal wall for diagnosis or for the removal of ascite and injection of air, fluid, or iodoform, is dangerous and should not be practiced.

Society Reports.

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

Annual meeting, held in Washington, D. C., September 19, 20, and 21, was well attended and very successful and a number of papers were read and discussed of scientific value and importance to the medical profession. The program included thirty-six papers and the report of seven standing committees on scientific questions relating to the medical application of the electrical current, with the best electrical apparatus extant. The proceedings of the convention will be found in their annual transactions to be published at an early date. The officers elected for the tenth year, are:

President, Walter H. White, M. D., Boston, Mass.; Vice-President, (1st) D. Percy Hickling, M. D., Washington, D. C.; Vice-President (2nd) Charles O. Files, M. D., Portland, Me.; Treasurer, Richard J. Nunn, M. D., Savannah, Ga.; Secretary, George F. Bill, M. D., Harrisburg, Pa.

The next annual meeting will be held in New York City, N. Y., on Sept. 25th, 26th, and 27th, 1900.

THE THIRTEENTH INTERNATIONAL MEDICAL CONGRESS.

(To be held in Paris, August 2-9, 1900.)

The American national committee of this coming congress, of which Dr. Henry Barton Jacobs, 3 W. Franklin street, Baltimore, Md., is secretary, has just issued the following circular addressed to physicians generally:

Baltimore, Md., Nov. 1st, 1899.

Dear Doctor:—The American National Committee of the XIIIth International Medical Congress, to be held in Paris from the 2nd to 9th of August, 1900, in connection with the French Exposition, has been organized as above indicated.

All Doctors of Medicine are entitled to membership in this Congress by making the proper application and paying the sum of$5.00. The Secretary-General in Paris has instructed the American National Committee to receive the applications of American physicians, and for this purpose a blank form is enclosed, upon which is to be written full name and address, degrees and any position of note held, together with the section of the Congress to which the writer wishes to belong. A visiting card should also be appended. These forms, with the $5.00, are to be returned to the Secretary of the National Committee. He in turn will send receipt and forward the slips and money to Paris, where they will be registered, and in due course of time a card of admission to the Congress mailed to each applicant.

The Committee hopes the American repre-

sentation in this extremely important Medical Congress may be as large as possible, and they would urge every member of the profession to enter his name for membership, this alone entitling him to receive a digest of the full proceedings of the Congress and the printed report* of the section to which he belongs.

The sections are as follows:

CLASS I. BIOLOGICAL SCIENCES.

A. Section of Descriptive and Comparative Anatomy. Secretary: M. Auguste Pettit, 60 rue Saint-André-des-Arts, Paris.

B. Section of Histology and Embryology. Secretaries: MM. Retterer and Loisel, 15 rue de l'Ecole-de-Médicine, Paris.

C. Section of Physiology, and Biological Physics and Chemistry. Secretary: M. Dastre, à la Sorbonne, Paris.

CLASS II. MEDICAL SCIENCES.

A. Section of General Pathology and Experimental Pathology. Secretaries: M. Charrin, 11 avenue de l'Opéra, Paris; M. Roger, 4 rue Perrault, Paris.

B. Section of Bacteriology and Parasitology. Secretary: M. R. Blanchard, 226 boulevard Saint-Germain, Paris.

C. Section of Pathological Anatomy. Secretary: M. Letulle, 7 rue de Magdebourg, Paris.

D. Section of Internal Pathology. (General Medicine.) Secretaries: M: Rendu, 28 rue de l'Université, Paris; M. Widal, 155 boulevard Haussmann, Paris.

E. Section of Medicine of Infancy. (Diseases of Children.) Secretary: M. Marfan, 30 rue La Boëtie, Paris.

F. Section of Therapeutics, Pharmacology and Materia Medica. Secretary: M. Gilbert, 27 rue de Rome, Paris.

G. Section of Neurology. Secretary: M. P. Marie, 3 rue Cambacérès, Paris.

H. Section of Psychiatry. Secretary: M. Ant. Ritti, Asile de Charenton, Seine (France).

I. Section of Dematology and Syphilography. Secretary: M. G. Thibierge, 7 rue de Surènes, Paris.

CLASS III. SURGICAL SCIENCES.

A Section of General Surgery. Secretary: M. Walther, 21 boulevard Haussmann, Paris.

B. Section of Surgery of Infancy. Secretaries: M. A. Broca, 5 rue del'Université, Paris; M. Villemin, 58 rue Notre-Dame-des-Champs, Paris.

C. Section of Urinary Surgery. Secretary: M. Desnos, 31 rue de Rome, Paris.

D. Section of Ophthalmology. Secretary: M. Parent, 26 avenue de l'Opera, Paris.

E. Section of Laryngology and Rhinology. Secretary: M. Lermoyez, 20 bis, rue La. Boëtie, Paris.

F. Section of Otology. Secretary: M. Castex, 30 avenue de Messine, Paris.

G. Section of Stomatology. Secretary: M. Ferrier, 39 rue Boissy-d'Anglas, Paris.

CLASS IV. OBSTETRICS AND GYNAECOLOGY.

A. Section of Obstetrics. Secretaries: M. A. Bar, 122 rue La Boëtie, Paris; M. Champetier de Ribes, 28 rue de l'Université, Paris.

B. Section of Gynaecology. Secretary: M. Hartman, 4, place Malesherbes, Paris.

CLASS V. PUBLIC MEDICINE.

A. Section of Legal Medicine. Secretary: M. Motet, 161 rue de Charonne, Paris.

B. Section of Military Surgery and Medicine. Secretary: M. Catteau, Ministère de la Guerre, Paris.

Members desiring to present papers will forward the title and a résumé, before May 1st, 1900, to the Secretary of Section to which they belong, for each Sectional Committee reserves to itself the right of drawing up its own working programme. Papers are limited to fifteen minutes.

Very sincerely yours,

HENRY BARTON JACOBS,
Secretary American National Committee.

*Communications respecting the delivery of these reports to members to be addressed to M. Masson, publisher of the proceedings of the Congress, 120 Boulevard St. Germaine, Paris.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

The recent meeting of this association in Chicago is said to have been the most successful from every point of view in the history of the organization. It was the twenty-fifth annual gathering of the association. All the discussions were full and complete.

The minutes will be published at once under the direction of the following committee on publication: Drs. Henry E. Tuley, Dudley S. Reynolds, and Lewis S. McMurtry.

The following officers were elected for the coming year: President, Dr. Harold N. Moyer, Chicago, Ill.; First Vice-President, Dr. A. H. Cordier, Kansas City, Mo.; Second Vice-President, Dr. S. P. Collings, Hot Springs, Ark.; Secretary, Dr. Henry E. Tuley, Louisville, Ky.; Treasurer, Dr. Dudley S. Reynolds, Louisville, Ky.; Chairman of Committee of Arrangements, Dr. M. H. Fletcher, Asheville, N. C.

The twenty-sixth annual meeting will be held in Asheville, N. C., October 9th, 10th and 11th, 1900.

URIC ACID HEADACHES.

Haig advises a diet of milk, cheese, pulses, cereal foods and fruit, with exclusion of fish, meat, eggs, tea, coffee and cocoa. For the increase of headache, which is to be expected at the beginning of this treatment, a mixture of ammonium bromide and ammonium salicylate is recommended.

Progress of Medicine.

OBSTETRICS.

UNDER THE CHARGE OF
A. B. CATES, A. M., M. D. R. E. CUTTS, B. S., M. D.

THE CAUSES WHICH RENDER DIFFICULT THE LABORS OF CIVILIZED WOMEN.

By G. A. Reid.—Lancet, Oct. 14th, 1899.

Dr. Reid criticised a previous article by Prof. Sinclair, in which he regretted the frequent use of forceps in deliveries and considered it simply a fashion. Dr. Sinclair was quoted as saying that in the beginning of the century, forceps were used in a certain hospital as often as once in 608 cases; while now they are used in at least 1% of the cases. To meddlesome midwifery Dr. Sinclair ascribed the great amount of gynecological cases now met with.

Dr. Reid differs with Dr. Sinclair and says that most torn perineii occur in non-instrumental cases and were due to a too forcible expulsive effort of the mother. He says, "Where these expulsive efforts could be modified by an anæsthetic rupture has been so rare that I have attributed it generally not to the use of the forceps, but to reprehensible lack of skill and patience in the medical attendant." In about 20% of his cases forceps or other surgical means were used and in none of these has it been necessary for them to consult a gynecologist.

The labors of civilized women are so severe that, were they not attended by skilled assistance, a large number would perish. It is different with the savage woman. Why this difference? The explanation offered is this: children inherit the peculiarities of their parents—e. g. large people tend to have large children, fair people fair children. It follows, then, that women with large pelves tend to have daughters with large pelves, and those with small pelves have daughters with small pelves; and that people, who at birth had large heads or small heads, tend to transmit this peculiarity also.

Savage women, generally speaking, have large pelves and bear children with small heads. Hence the ease of their labors. When, however, a savage woman has a small pelvis and the babe a large head, thus requiring surgical aid to deliver, it means death to her and her babe. Thus the race is ridded from generation to generation of large heads and small pelves. But in the civilized races greater skill and care preserves these women and babes and so from generation to generation the disproportion increases and the true proportion is lost. This is the reason the difficulties of labor are gradually increasing. Dr. Reid predicts that in the not very remote future normal labor will be the exception, not the rule.

R. E. C.

A SAFE AND SIMPLE METHOD OF REMOVING THE PLACENTA.

Herman Gasser, M. D., of Plattsville, Wis. (Med. Record, Aug. 5, 1899), says: During my first two or three years of practice, it was my habit to use Credé's method of expressing the placenta, with general satisfaction to me, but in nearly all cases there was complaint of pain by the patient as a result of the manipulation.. Now, after the second stage of labor is completed, it is usually my practice to keep watch for about ten or fifteen minutes, which, also, in the meantime, gives the patient a rest. I then catch hold of the cord with my hand, gently grasping the fundus through the abdomen with the left, when I direct the patient to press it out, which she generally does at once. When, by gentle traction on the cord and slight compression on the fundus, I find it coming, I order the patient to relax her efforts.

Since using this simple and sensible method I have not had any "adherent placentæ," that we hear so much about. That they exist, though rarely, no doubt is true. Gentleness and patience should be practiced to secure the membranes intact, for much of the future comfort and progress of the patient is dependent upon this seemingly simple procedure. R. E. C.

NEW DIAGNOSTIC SPOTS OF MEASLES ON THE BUCCAL AND LABIAL MUCOUS MEMBRANES.

Henry Koplik, in the Med. News, says that every case of measles is accompanied by the development of peculiar spots upon the mucous membrane of the lips and cheeks. These consist of small, somewhat circular, spots, which become bluish-white toward the center. Later the circular outlines disappear and the spots coalesce, leaving the mucous membrane of a somewhat darker color, studded over with these bluish-white spots. This appearance commonly shows intself from one to five days before the breaking out of the disease. With the appearance of the eruption this sign gradually disappears. It is claimed by the writer that the sign is of differential value in distinguishing other eruptive diseases, notably scarlet fever and German measles. The examination must always be made by daylight and with good illumination.—Ex.

Tommy: Mamma, why have you got papa's hair in a locket?

His Mother: To remind me that he once had some, Tommy.

Neurology and Psychiatry.

UNDER THE CHARGE OF
R. O. BEARD, M. D., W. A. JONES, M. D.

PARALYSIS AGITANS AND SARCOMA.

(Report of a case with autopsy by Charles L. Dana, M. D.)

The author (Am. Jour. Med. Sci. Nov., 1899) gives a careful study of the pathology of a case of paralysis agitans, which was accompanied by warty growths in the lower extremities, which proved to be sarcomatous in origin.

Tha patient J. B., aged 61, gave a family history of no importance, and neither father nor mother had suffered from nervous or mental disease. Patient had had malaria but denied syphilis, and had been moderate in the use of alcohol and tobacco. Present disease began seven years before patient's death and was ascribed by him to fright and fall on the street. First symptoms were tremor in the left hand, followed by weakness in that arm, and the disease progressed in the usual way from arm to leg and from the left side to the right.

Six years after the beginning of the disease the patient presented the following condition: mental condition fair; memory good; speech monotonous, slow, and sometimes unintelligible; face flushed and mask-like. The tremor, which is present in the arms and head and to a less extent in the legs is in general slight and stable, but increases at times on intentional movements. There is a very considerable rigidity of the limbs, as well as weakness and the usual difficulty in initiating movement. His station is that of the pronounced paralysis agitans type, and the gait is characteristic, the steps being quick and short, with a tendency to retropulsion when the patient stops. The tongue is thickly coated, and when protruded trembles very perceptibly, but the pharyngeal reflex is present and the motility of the soft palate is undisturbed. There is inability to wrinkle the forehead, but the motility of the lower facial branches is normal. The pupils are small, reaction good; ocular movements very slow and somewhat limited in the lateral positions. Vision and hearing, as well as smell and taste seem normal, but there is some stiffness of the jaw and difficulty in swallowing. There is no disturbance of the sensibility of the skin and no ataxia or incoördination. Superficial reflexes are present and moderately lively; knee-jerks also present.

On electrical examination and stimulation there is a decided quantitative diminution of the direct reaction, and contraction is vermiform. The general condition is as follows: pulse 72, somewhat hard; temperature 97.5; respiration normal. Manner is normal, and there are no stigmata of anatomical degeneration. The mouth is without teeth. There was steady increase in weakness, rigidity and emaciation but no marked change up to the time of death, which occurred eight years after the beginning of the disease.

The postmortem outside of the nervous centres showed no lesion of importance except the cutaneous sarcoma. Microscopical examination showed the following conditions: some general atrophy of the cord, with moderate increase in connective tissue and dilatation of perivascular spaces; no special thickening of the blood vessels either veins or arteries, and no meningeal thickening; pronounced changes however in the anterior cornual cells, consisting of atrophy of these cells, pigmentation and vacuolization, loss of dendrites and diminution in the richness of the plexus formed by the dendritic processes, the whole process being most marked in the upper cervical and lower dorsal region; Clarke's column is not markedly affected; the brain cortex shows slight degeneration of cells, and the olivary nerve-cells are much degenerated; the peripheral nerves are normal although the muscles and end plates show some fatty degeneration.

The negative findings to be especially noted are: the absence of degeneration in the white matter, the fact that there was no general arterial sclerosis, and the absence of any change in the sciatic and ulnar nerves although in the regions supplied by them there was degeneration both of the muscular fibres and the end plates of the nerves.

Dana entirely disagrees with the supposition that paralysis agitans is merely a premature condition of senility. He says: "The history of the disease shows that it is primarily a parenchymatous nervous disease. The onset is sometimes very sudden, and shows the almost apoplectic-like disturbances of certain groups of nerve-cells. The clinical facts and the pathological examinations in cases of paralysis agitans lead one fairly to infer that the incidence of the attack falls (1) upon the dendrites of the cells of the anterior horns of the spinal cord, or, (2) else upon the end-brushes of the neuraxons that come from the voluntary motor tract and the cortical motor centres of the brain. We might in the latter case establish a sort of analogy between paralysis agitans and locomotor ataxia. Thus while in locomotor ataxia the effect of the pathogenic poison is to produce a degeneration of the axis cylinder of the posterior spinal ganglion cells, this degeneration, often apparently beginning in the periphery, and not closely involving the cell body at first, in paralysis agitans the special poison affects the end-brushes of the axis cylinders of the cortical motor cells of the brain, producing a destruction of them, but not involving the main trunk of the axis-cylinder.

In regard to the pathogeny, the author suggests that the late and secondary effects of infections and poisons on the nervous system are

not given sufficient prominence, and mentions that rheumatism is the disease most frequently mentioned in the preceding history of such cases, adding: "and there are many facts in the clinical history of the disease which suggest a relationship between paralysis agitans and that form of rheumatic manifestation which is known as rheumatoid arthritis." W. A. J.

A STUDY OF A CASE OF FAMILY PERIODIC PARALYSIS.

(By John K. Mitchell, M.D.)

The author (Amer. Jour. Med. Sci. Nov., 1899) gives an exceedingly full and minute description of all the functions in the patient under his care afflicted with this rare disease. The other members of the family who had suffered in the same manner were the maternal grandfather and one of his male cousins, both of whom ceased to have the attacks in middle life. The mother of the patient began to have such attacks at fourteen and had them at long and irregular intervals until her thirty-eighth year. Of the five others in her own family an older brother had a single attack brought on by over-exertion and a younger grother began to have the attacks only after he came to manhood and then had them infrequently. A daughter of this brother has periodic palsies of this sort.

The present patient C. H. J., nineteen years of age, is a normal healthy boy, well developed, in admirable physical condition, and much disgusted with the enforced idleness of this disablement. In fact, nothing about the patient between or during the attacks suggests the possibility of an hysterical element. The attacks began when he was about thirteen years of age and without known cause. The character has not changed, although they have been increasing in frequency and for six months before he was first seen by the author they had been coming regularly on the same day of the week. "Many attacks were seen in the hospital, and the various seizures differed only in the degree of immobility produced. Sometimes for a few hours in the afternoon or evening the patient notices slight weakness in the lower limbs, and if examined at this time at least one decided symptom is present—a lessening of the knee-jerk. This prodromal symptom is not always present. He may go to bed prefectly well, and awake in the morning wholly paralyzed from the neck down. Even the neck is somewhat involved, for, although he can turn the head from side to side, he cannot lift it from the pillow, and if placed in an erect position, the head falls forward on the chest, or backward almost between the shoulders, without the possibility of any control on the patient's part."

Breathing in the attacks is shallow, and he cannot take a normally full inspiration, or cough, while irritation of the nares does not cause sneezing, although he feels the annoyance. Sensation is absolutely normal. He does not have much appetite during the attack, usually passes water only once or twice in the twenty-four hours and has no fecal movement. There is no disturbance of the mind; speech is not affected, and he has no pain.

The physical examination during the attack showed him to be notably paler than during the interval, his tongue is somewhat coated and his breath has a heavy smell. The breath sounds show slight general lessening. The apex-beat is below the fifth rib, rather indistinct, two and a quarter inches from the mid-sternal line. At times there was a split second sound, very distinct in the pulmonary area, and a systolic murmur well heard upon full expiration and limited to the same area, transmitted somewhat up and down the left side of the sternum, strong and decided, but not loud and harsh. The reflexes were totally lost, and in the typical attack there was practically total abolition of reaction to any form of electrical stimulation. The most painstaking examination of the urine gave no variations outside of the normal. The same was true in regard to the microscopical examination of the blood, and the experiments made to determine its toxicity.

Dr. Mitchell discusses the possible relation of such attacks to migraine, and although finding no fact to bear out the theory, inclines to the belief that the cause is toxic.

Treatment was unsatisfactory. W. A. J.

A CASE OF LARGE TUMOR OF THE BRAIN,

(Producing few Symptoms save Ocular Changes, with Remarks on the Value of Double Optic Neuritis as a Sign of Brain Tumor, by James Moores Ball, M.D.)

The author (Phil. Med. Jour. Oct. 28th, 1899) describes under the above title a case of very doubtful diagnosis which he himself decided from the ocular symptoms to be brain tumor, in which opinion the autopsy proved him to be correct. The localizing symptoms were few and indefinite, and pointed to the opposite side of the brain from that in which the tumor was located, so that the surgeon investigated the normal side.

Dev., the patient, was a physician 51 years of age, who for twenty years had suffered from supraorbital neuralgia of the right side and for twelve or fourteen years had had irregular attacks of reflex vomiting. For four days previous to being seen had had great pain in the back of the neck, which was most intense over the right cerebellum. "To concentrate my sight or to concentrate my thoughts brings on pain over the right eye," he said. He was constipated, stumbled in walking, had at times rheumatic pains in arms and leg, but showed no bladder symptoms. For past seven or eight weeks had complained of diplopia both vertical and hor-

izontal. Ocular examination showed right external rectus paretic, and other muscles normal. Pupils were small and sluggish, and ophthalmoscope showed marked condition of double choked disc. A diagnosis of brain tumor was made, with unfavorable prognosis. Three other physicians gave diagnoses of chronic vertical meningitis, cerebral syphilis and cerebral abscess.

Three days later the patient became suddenly blind, and was unable to locate the direction from which sound came. There was unsteadiness of gait, impaired coördination on standing and a sensation of pinching most marked in the third and fourth fingers of the right hand, and present to a less degree in the first and second fingers of the same hand. Temperature was subnormal and pulse at first 80 slowly increased to 100. Patiently grew steadily worse, polyuria became manifest, the urine showing a specific gravity of 1.008 and abundant phosphate, but no other abnormal constituents.

As a last resort he was trephined on the left side by Dr. Lanphear, who still maintained his diagnosis of abscess. The patient died in a few hours and autopsy showed a large tumor on the right side which grew from the dura over the opercula of the island of Reil. Microscopical examination showed this to be a spindl-celled sarcoma.

Dr. Lanphear defends his diagnosis of abscess by recounting the following points in its favor: 1. History of middle ear disease on the left side. 2. Headache which was severe and continuous, and failed to show the ordinary characteristic of tumor headache, which is increased by tapping on the skull, and is intensified by the slightest movement. The headache was located on the left side and was not diffuse. 3. Disturbed sleep. 4. Paralysis of abducens, which is rare in tumor, but according to Wernicke is a particular feature in abscess. 5. Long period of subnormal temperature which is characteristic of intracranial suppuration.

Moreover, three characteristic symptoms of tumor were lacking, namely cerebral vomiting, convulsions and paralysis of other muscles than the abducens. The localizing symptoms all of which pointed to the wrong side, were paralysis of the tongue, and of the external muscle of the eye on the right side, pain on the left side of the head, and numbness and tingling sensation of the fingers of the right hand. It was certainly peculiar that a tumor impinging very much upon the Rolandic area should give rise to no convulsive movements of the opposite side.

Dr. Ball closes the paper by a careful discussion of the conditions producing choked disc and the indications for distinguishing between them. Although choked disc is an exceedingly valuable aid for the diagnosis of tumor it is of absolutely no value in determining its position. Moreover, it may not develop until late in the history of the case. W. A. J.

Book Notices.

THE NERVOUS SYSTEM AND ITS CONSTITUENT NEURONES. Designed for the use of Practitioners of Medicine and Psychology. By Lewellys F, Barker, M.D., Tor., assistant Professor of Anatomy in the Johns Hopkins University and assistant resident Pathologist to the Johns Hopkins hospital. With two colored plates and seventy-six Illustrations in the Text. D. Appleton & Co., publishers, New York. Sold by subscription. Price, cloth, $6.00.

The book just brought out by Professor Barker not only forms an exceedingly valuable contribution to the literature of the nervous system. but is also an eminently interesting one, and, although this latter quality is undoubtedly not of prime importance, it will win the gratitude of those who wade through much of the valuable but unilluminated literature more commonly produced upon the nervous system.

The earlier sections of the book which treat of the Development of the Neurone Concept, the External and the Internal Morphology of the Neurones, their Histogenetic relations, and the Neurone as the Unit in Physiological and Pathological Processes, will be remembered by readers of the New York Medical Journal since they appeared first in that periodical during '97 and '98. Their interest and value have, however, been much increased by many additional illustrations, among which are some fine reproductions of the colored plates from Goldscheider and Flatau's work upon the "Normal and Pathological Anatomy of the Nerve-cells." The sixth section of the book—and this comprises fully two-thirds of the present volume of more than a thousand pages—is entirely new and deals with the "Grouping and Chaining together of Neurones in a Complex Nervous System like that of Man or Mammals." The following subsections are considered under this main head: I. Neurones connecting the sense organs of the body with the central nervous system. II. Neurones within the central nervous system connecting the end-stations of the sensory axones with other portions of the central nervous system. III. Neurones directly connecting the central nervous system with the voluntary muscles of the body. IV. Neurones which enter into the conduction relation with the lower motor neurones and throw the latter under the influence of other centers V. Projection neurones, commissural neurones, and association neurones of the telencephalon. Under this admirable arrangement one never loses sight of the main features of the nervous architecture, even in the midst of its innumerable complexities, and the widely varying views of the investigators upon certain important points. In the introduction to this sixth section Barker says, "If he has not obtained 'ideas in three dimensions' of the group

of neurones and their interrelations inside the central nervous organs, the student will find himself entirely at sea when he attempts the explanation of the results of pathological lesions," and every effort has been made in the present book to aid in giving this definiteness of knowledge by means of numerous and fine illustrations and careful diagrams. The book is finely gotten up, beautifully illustrated, and the text is fascinating. The publishers as well as the author deserve great credit for a great work. W. A. J.

ANNUAL AND ANALYTICAL CYCLOPÆDIA OF PRACTICAL MEDICINE. By Charles E. de M. Sajous, M.D., and One Hundred Associate Editors; assisted by Corresponding Editors, Collaborators and Correspondents. Illustrated with Chromo-Lithographs, Engravings and Maps. Vol. III. The F. A. Davis Company, Publishers, Philadelphia, New York and Chicago. Price, cloth $5.00; half Russia $6.00. (Six royal octavo volumes comprise the set.)

It is believed that every progressive practitioner, especially of the West, keeps abreast of the progress in medicine not only by reading medical journal literature, but also by constant reference to such valuable and classically written theses as are to be found in the encyclopædias, particularly that of Sajous' annual compendium. Much has been given in this series heretofore and much is always expected as the volumes appear from the press of the publishers.

The third volume sustains the reputation of the preceding two and is a premise of the four to follow. The fact is that when the physician has the entire set in his library he has a very complete digest of the current annual advance in the practice of medicine, from which he can always draw much information in the diagnosis and treatment of diseases daily met with in his practice.

The author pays glowing acknowledgement to the kind reception by the profession of the preceding volumes, but, as he says, much is due to the continued assistance of the members of the associate staff, all of whom have "given the work the benefit of their best efforts." In his preface the author particularly draws attention to a trio that is well-nigh invincible in their treatment of the subjects assigned to them, pointing out as they do much of the progress that is to attend medicine in the near future. These articles are "Infantile Myoederma (Cretinism)," by Professor Osler and Dr. Norton, of Baltimore; "Exophthalmic Goitre," by Professor Putnam, of Boston; and "Goitre," by Professor Adami, of Montreal. Among the numerous models of high-class medical literature which we note in this volume are the following, which alone will be found of immense benefit to the wideawake disciple of Æsculapius: "Dysentery," by Dr. Flexner, of Baltimore; "Endrometritis," by Professor Byford, of Chicago; "Dislocations" and "Fractures," by Professor Stinson and Dr. Keyes, Jr., of New York; "Gout," by Dr. Levison, of Copenhagen; "Hip-joint Disease," by Dr. Reginald H. Sayre, of New York; and "Eczema," by Professor Stelwagon, of Philadelphia. All the above articles are esecially valuable. Finally, we notice that Professor Eskridge of Denver has an interesting analytical study of "Hysteria and Hypnotism," which presents many of the newer features of an old subject.

A TEXT-BOOK OF MATERIA MEDICA. By George Frank Butler, Ph.G., M.D., Professor of Materia Medica and Clinical Medicine in the College of Physicians and Surgeons, Medical Department of the University of Illinois; Professor of General Medicine and Diseases of the Digestive System, Chicago Clinical School; and attending Physician to Cook County Hospital, etc. Third edition, thoroughly Revised. W. B. Saunders, 925 Walnut street, Philadelphia. Price cloth, $4.00; sheep or one-half Morocco, $5.00 net.

The author has adopted the synthetic classification of drugs, based upon therapeutic affinities, thus materially aiding the student to a thorough knowledge of each drug.

Drugs of questionable value have been omitted, thus increasing the usefulness of the work to the student.

The author makes a distinction between "untoward action" and "poisoning," a very wise plan, as individual peculiarities or idiosyncrasies may develop a marked susceptibility to certain drugs, with the development of certain unpleasant symptoms, which cannot properly be classified as poisonous effects.

This text-book on materia medica is most excellent in every way, the type being clear and distinct, and moreover, the size of the work is convenient for daily use.

F. F. C.

ESSENTIALS OF PHYSICAL DIAGNOSIS OF THE THORAX. By Arthur M. Corwin, A.M., M.D., Inspector of Physical Diagnosis in Rush Medical College, etc. Third edition, revised and enlarged. W. B. Saunders, 925 Walnut street, Philadelphia. Price, $1.25 net.

The author of this little volume has given the student and practitioner in small compass a systematic outline of the essentials of physical diagnosis of the thorax—a bouquet as it were of choice flowers culled from all available sources.

Students generally will regret that the author did not extend his happy method of grouping the essentials, and include the abdomen within the scope of the work. As an instructor, I regret that the author did not include among the methods of physical examination calormetation and auscultatory percussion. It would have added to the clearness of the work and rendered it more valuable to the student as a class book, had the

author considered the physical methods separately in their application to the respiratory and circulatory systems.

The few pages added to the last edition, relative to percussion of the normal chest is a timely and valuable addition. No student should be permitted to advance, much less attempt to pass judgment on the abnormal chest until he has mastered the normal physical signs.

The volume is singularly free from typographical errors.

This work is one deserving of commendation —in it the busy practitioner will find much of practical value in a concise form—the student, an outline which will enable him by the aid of collateral reading to gain a thorough knowledge of physical diagnosis. J. W. BELL.

ESSENTIALS OF MEDICAL CHEMISTRY, ORGANIC AN INORGANIC; containing also questions of Medical Physics, Chemical Philosophy, Analytical Processes, Toxicology, etc. Prepared especially for Students of Medicine. By Lawrence Wolff, M.D., Demonstrator of Chemistry, Jefferson Medical College, etc. Fifth Edition, thoroughly Revised by Smith Ely Jelliffe, M.D., Ph.D., Profesor of Pharmacognosy, College of Pharmacy of the City of New York, etc. Philadelphia. W. B. Saunders, 925 Walnut street. Price cloth $1.00 net.

Saunders' Question-Compends have become so popular that over 175,000 copies have already been sold, and the particular publication here referred to, which is No. 4 of the series, and the 5th edition at that, contains the fundamental principles of physics and chemistry, which have not changed much during the past few years, necessitating, therefore, but few changes in this department, from the previous edition, and also. several chapters on organic and physiological chemistry, which of necessity required copious changes to include the new facts that have recently been established. The book, containing 222 pages, presents the whole subject in the categorical style of instruction, making it available to the student, or physician desiring to review the subject. In few words the foundation and framework is laid for a broader and a deeper study of the subject, yet, if one assimilates all the information this little volume contains he will have a pretty thorough knowledge of the essentials of medical chemistry.

These books have become the standards for use of students, and this work sustains the reputation of the publishing house for concise and thorough mechanical execution.

PULMONARY TUBERCULOSIS, ITS MODERN PROPHYLAXIS AND THE TREATMENT IN SPECIAL INSTITUTIONS AND AT HOME. Being the Alvarenza Prize Essay of the College of Physicians of Philadelphia for the year 1898, revised and enlarged. By S. A. Knopf, M. D. (Paris and Bellevue, N. Y.), Physician to the Lung Department of the New York Throat and Nose Hospital; former assistant Physician to Prof. Dettweiler, Falkenstein Sanatorium, Germany; vice-President of the Pennsylvania Society for the Prevention of Tuberculosis; Fellow of the American Academy, and of the New York, Academy of Medicine; Laureate of the Academy of Medicine of Paris, etc. With descriptions and illustrations of the most important Sanatoria of Europe, the United States and Canada, 343 pages. P. Blakiston's Son & Co., Philadelphia.

This book of Dr. Knopf marks a new era in the treatment and whole management of pulmonary tuberculosis. For the old regime of internal exhibition of syrups, cod liver oil, et cetera, and the promiscuous mingling of phthisical patients with the non-infected at homes, at health resorts, at general hospitals and elsewhere, it is the substitution of treatment in closed hospitals, under the constant supervision of physicians skilled in their work. It is the author's purpose in this book to explain this modern method by treatment which he is pleased to call phthisiotherapeutics, and without doubt he has succeeded in an admirable manner.

Forty years ago Dr. Herman Brehmer opened the first sanatorium in Germany for the exclusive treatment of tuberculosis. His distinguished pupil and co-worker, Dr. Dettweiler, modified Brehmer's method somewhat by instituting the rest cure sanitoria, in which the precepts of these two men for the treatment of tuberculosis are being eagerly followed with marvellous results, and are now instituted all over the world.

Dr. Knopf's French thesis, Les Sanatoria: Traitement et Prophylaxie de la Phthisis Pulmonaire, procured for him the degree of the University of Paris in 1895. He then became pupil and assistant of Dr. Dettweiler at the Sanatorium Falkenstein. Here he had rare opportunities to study the management of tuberculous patients in establishments closed against all other classes of disease. He then by an extensive trip visited in both continents many sanatoria, special hospitals, and numerous health resorts set apart exclusively for the treatment of pulmonary tuberculosis. All this has been followed by continuous study with ample laboratory and clinical facilities to carry out experiments; and the author declares his object in presenting this book to the English speaking medical world is to give, in addition to his own studies and researches, the latest thought of leading sanitarians, hygienists and physicians in both Europe and America in the field of phthisio-therapeutics.

The work is the embodiment of the author's labors, extending through several years, inspired by the sanguine belief that tuberculosis is not only curable, but that it may be made to disappear from the face of the earth.

The chapters include interesting data as to the history, mortality, communicability and prophylaxis of tuberculosis. But the most interesting features of the work are the illustrations and descriptions of numerous sanatoria and the methods of treatment pursued in them.

The author holds that no climate is a specific in treatment, of itself, but that hygienic and dietetic treatment in closed establishments is the all-important factor; and the best thing to do is to establish sanatoria, with the most favorable conditions possible, near the patient's home.

Any one, physician or layman, whose interest in the subject of tuberculosis creates a desire to become acquainted with the latest and most important information on that subject will find Dr. Knopf's work of surpassing interest. The illustrations and make-up of the book are altogether worthy of the well known publishers.

J. H. STUART.

ESSENTIALS OF DISEASES OF THE SKIN, including Syphilodermata, arranged in the form of Questions and Answers, prepared especially for Students of Medicine. By Henry W. Stelwagon, M.D., Ph.D., Clinical Professor of Dermatology in the Jefferson Medical College, etc. Fourth edition, thoroughly revised. Ilustrated. Philadelphia: W. B. Saunders, 925 Walnut street. Price cloth $1.00 net.

This book is one of the series of Saunders' Question-Compends, which have reached the enormous sale of 175,000 copies. This volume on diseases of the skin, being No. 11, is the fourth edition. Many changes and additions have been made, notably the addition of brief descriptions of some of the more rare cutaneous diseases, such as hydrova vacciniforme, phlegminosa diffusa, epidemolysis bullosa, etc. These and other additions enhance the value of the book. It has the popular categorical style throughout, and the edition was thoroughly scrutinized for errors that will sometimes creep in, as well as to conform to new facts that have been established by experimentation by many of the best authorities of the world. Our present knowledge of cutaneous diseases is very well set forth by the author in his terse answers to the questions which he ingeniously introduced in their proper order. Each disease elucidated has its proper share of space according to its relative importance, and the treatments suggested are those founded upon the combined experience of representative dermatologists. All students of medicine should by all means have access to this book, and the general practitioner will find here all the latest phases of the subject presented in such condensed form that he will find it exceedingly useful.

ESSENTIALS OF ANATOMY, including the Anatomy of the Viscera, arranged in the form of Questions and Answers. Prepared especially for Students of Medicine. By Charles B. Nancrede, M.D., Professor of Surgery and of Clinical Surgery in the University of Michigan; Emeritus Professor of General and Orthopedic Surgery, Philadelphia Polyclinic, etc. Sixth edition, thoroughly revised by Fred J. Brockway, M.D., Assistant Professor of Anatomy, Columbia University, New York. W. B. Saunders, Publisher, 925 Walnut street, Philadelphia. Price, $1.00 net.

The reviser of this, the sixth edition, unostentatiously asserts that he has made a few changes in the former edition, and gives full credit to the work of the original author. Really, it is remarkable that a small book on this well-worn topic should pass to the sixth edition, but, nevertheless, such has been the remarkable success of the first five, that to keep up with the demand it was made imperative upon the publishers to set their presses in motion to supply the students throughout the country. The original scope of the categorically-arranged text of the book was to cover all the essentials in the study of anatomy, and how well the author succeeded is evidenced by the immense sale. Conciseness of diction has been applied to perfection, but, as the author says, no small work of the kind will ever displace the larger anatomical tomes that are and have, for many years, been considered as standard, yet a careful perusal of his little volume will refresh the minds of the oldest practitioner or the well-advanced student in the more numerous facts discussed in the lecture and dissecting room. The style, illustrations and arrangement, together with the printing execution, are superb.

CLAY DRESSINGS.

Students of medical history know how great value was attributed by Galen and others to Lemnian earth, "terra sigillata," as an absorbent. Dr. Stumpf, having noticed the remarkable preservation of a dead body embedded in clay, and considering this due to the antiseptic and absorbent properties of the earth, determined to use the latter in the treatment of suppurating wounds and ulcers. He first sterilizes the clay by heat and then powders it over the wound, covering the whole with a gauze compress. "Under the dressing, which it is often unnecessary to renew, wounds and ulcers rapidly cleanse and cicatrize." Dr. Melissinos, of Gaute, confirms this by the history of a vine-dresser who on the advice of his companions dressed a severe wound penetrating the knee-joint with clay, and, though not otherwise attended to for fifteen hours, the wound healed by first intention and the joint remained intact.—Medical Magazine.

THE BACILLUS OF SYPHILIS.

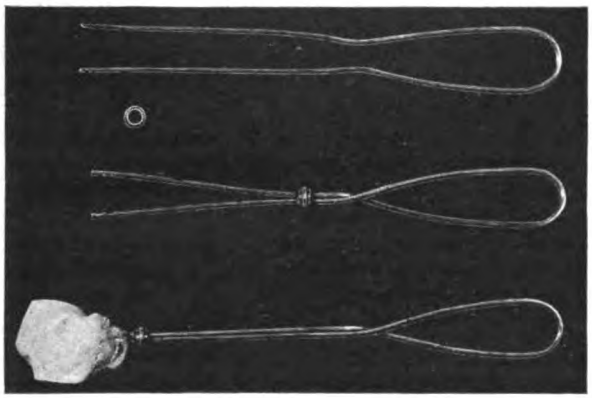
Van Niessen claims to have discovered the specific micro-organism, a short streptobacillus, in the blood and tissues of syphilitic patients in the secondary stage of the disease. Injections of cultures of this bavillus into rabbits produced the characteristic lesions.

New Inventions.

SIMPLE ANTISEPTIC GAUZE HOLDER FOR SPONGING.

By John H. Rishmiller, M.D., Minneapolis.

There are so many sponge or gauze holders on the market that I offer this with some reluctance to the profession. This simple contrivance was devised when I served my term as House Surgeon to the Woman's Hospital of New York City, and was then used with entire satisfaction in the three operating rooms of that institution. I have likewise used it in all my private operative work for the past five years, and can heartily recommend it to my confreres as possessing qualities not surpassed by others.



As will be observed by the accompanying three cuts, this instrument possesses neither lock nor catch—permitting it thereby to be the more easily rendered antiseptic. It is readily taken apart as seen in the illustration. There are three horizontal grooves in the jaws which firmly grasp and hold without slipping any sized piece of gauze for sponging.

This forceps particularly appeals to the coeliotomy surgeon or to any operative procedure in a deep cavity, in which it has no peer. The blades are long and slender, consequently being very little in the way of the operator. This gauze holder for sponging was made after my design and suggestion by Lincoln and Luchesi of New York.

DISINFECTION OF SLEEPING ROOMS.

Professor Konig, of Gottingen, in a recent article on this subject says that at one time while he was practicing medicine in Hanau, he suddenly discovered that his bedroom was thickly inhabited by obnoxious insects. A friend assured him that he could easily get rid of the pests, and proceeded to fumigate the apartment with corrosive sublimate. The success of this measure was most gratifying, and when the room was opened the dead bodies of various kinds of insects were seen strewn about the floor. This incident led the professor to hope that the same means would be effectual in destroying the infectious elements of contagious diseases, and a trial in private houses after scarlet fever or measles and in hospitals after erysipelas or pyæmia, gave most satisfactory results. Since adopting this method he has never seen a second case of a contagious disease which could be attributed to infection remaining in the room in which the patient had been confined.

The mode of procedure is very simple. From one and a half to two ounces of corrosive sublimate are put on a plate over a chafing dish and then the windows and doors of the room are closed. At the expiration of three or four hours the windows are opened and the apartment is thoroughly aired. The person entering the room should take the precaution to hold a sponge or cloth over the mouth and nose in order not to inhale the vapor. The following day the windows are again closed and some sulphur burned, in order to neutralize any of the mercurial fumes which may linger about the furniture and other articles. The room should then be again aired and cleaned, when it will be ready for occupancy.—Massachusetts Med. Jour.

POINTS IN FAVOR OF THE USE OF ALCOHOL AND THEIR REFUTATION.

Dr. Bienfait (Gaz. hebd. de Méd. et de Chir.) examined point by point the various objections to total abstinence:

1. Is alcohol a digestive? No; its ingestion produces a passing excitation, interrupts the proper action of the muscles of the stomach because alcohol acts as an anæsthetic after having irritated the walls of the stomach, and it drives the blood to the skin and so hinders the action of the gastric juice.

2. Is alcohol an appetizer? No; it produces an excitation of the stomach which causes a sen sation taken for hunger.

3. Is alcohol a food? No; it does not correspond to the definition of a food, and the heat that it seems to produce does not serve as an actual warmth.

4. Is alcohol heating? No; it causes a flow of blood to the skin and a lowering of temperature.

5. Is alcohol a stimulant? In no case, either physical or intellectual.

6. Is alcohol a protector against contagion? No; it predisposes the body to contagion.

7. Can we live without alcohol? This idea that we cannot live without alcohol is a prejudice that numerous facts contradict.

8. Is alcohol good for children? It should never be given to children.

9. Does alcohol increase longevity? According to reliable statistics alcohol diminishes longevity.—Med. Rec.

Index Medicus.

Enclosed figures indicate prices for single copies.

THE MEDICAL DIAL, Minneapolis, Minn. (10). September: The value of a leucocite count in appendicitis, G. D. Head, Minneapolis.—Some abuses of nasal surgery, W. S. Laton, Minneapolis.—Surgical tuberculosis, G. G. Eitel, Minneapolis.—Suprarenal extract in ophthalmic aural and allied surgery, A. C. Aldrich, Minneapolis.—Recurrent appendicitis, with report of a case, W. Z. Flower, Gibbon, Minn.—Do we need iodoform, F. A. Dunsmoor, Minneapolis.—The importance of the recognition of certain blood-changes, and especially toxaemia in our therapeutics, J. V. Shoemaker, Phildelphia.—Tetanus in the light of modern research (ed.).—The Minnesota National Park (ed. by R. O. Beard).—Index-medicus, giving list of current original articles in the medical journals.

October: An arm saved after being run over and crushed by a railway locomotive, S. L. Kilmer, South Bend, Ind.—Fibroma molluscum (illustrated), Fred. J. Leviseur, N. Y. C.—Myasthenia gastrica, J. W. Bell, Minneapolis.—Tetanus and tetanus serum, report of a case, E. W. Flint, Minneapolis.—The legal responsibility of physicians in certain cases, F. F. Casseday, Minneapolis.—The differential diagnosis of small pox, chicken pox and measles, G. R. Curran, Worthington, Minn.—Some thoughts about vaccination (ed. by Knut Hoegh).—Demise of George Hendricks, M. D. (ed.).—The treatment of cancer by the cataphoric diffusion of the oxychlorides of mercury and zinc, the Massey treatment, G. Betton Massey, Phila.—Modifications of Bottini's operation for hypertrophy of the prostate by galvano-cautery, Robert Newman, N. Y. C.—The pathogenesis of functional nervous diseases and their prophylactic indications, John Punton, Kansas City.—Technic of abdominal hysterectomy, J. H. Carstens, Detroit.—Two cases of dystocia due to ventrofixation, one requiring Caesarian section, X. C. Werder, Pittsburg.—Report of a case of complete hernia of the pregnant uterus, W. V. Anderson, Toledo.—Index-Medicus.

MEDICAL EXAMINER, N. Y. C. (20). November: Human tuberculosis, contagious and hereditary, considered from an insurance point of view, J. Meyer, Metz.—The parasites of the malarial fevers, T. C. Craig, Surg. U. S. N. (Retired).

JOUR. OF THE MISS. STATE MED. ASS'N, Biloxi. (10). November: A case of eclampsia, B. L. Cully, Jackson, Miss.—Electrolysis in the treatment of diseases of the lachrymal apparatus, T. A. Barber, Meridian, Miss.—Report of a case of extensive fracture of the skull, E. J. Johnson, Eden, Miss.—Puerperal septicæmia, H. N. Street, Gloster, Miss.—The difficulty of differential diagnosis in gunshot wounds of the abdomen, E. M. Holder, Memphis.

JOUR OF MED. AND SCIENCE, Portland, Maine. (10). November: The ethmoid bone and nasal catarrh, A. F. Sumner, Concord, N. H.—Antitoxine in diphtheria, L. D. Rand, Fairfield, Me.—The hypodermic syringe in vaccination, F. H. Gardner, Portland.—Urethral instrumentation in the male, B. B. Foster, Portland.

LEHIGH VALLEY MED. MAGAZINE, Easton, Penn. (10). October: Litigation against railroad companies, W. G. Weaver, Wilkes-Barre, Pa.—Notes of typical cases of suppurative appendicitis, W. L. Estes and W. P. Walker, S. Bethlehem, Pa.

INTERNATIONAL MED. MAGAZINE, N. Y. C. (20). November: Effects of influenza upon the heart and circulation, their clinical manifestations and their treatment, A. E. Sansom, London.—A case of myxedema (illustrated), A. A. Eshner, Phila.—Hemorrhagic diathesis in typhoid fever, J. H. Musser and J. Dailer, Phila.—Altitude and heart disease, H. Sewall, Denver.—Treatment of syphilis (continued), J. D. Thomas, Pittsburg.—Pus and its treatment, E. W. Holmes, Phila.—Treatment of chronic asthenic gastritis (ordinary chronic gastric catarrh), B. Reed, Phila.

SANITARY HOME, Fargo, N. D. (10). December: Food, what it is, Susanna W. Dodds, St. Louis.—Water and disease, D. H. Reeder,—The salutary ingredients of life, C. P. Robbins, Winona, Minn.—Alcoholism and alcohol, G. D. Haggard, Mnpls.

JOURNAL OF PSYCHO-ASTHENICS, Faribault, Minn. (30). September: Presidents annual address Mary J. Dunlap, Vineland, N. J.—The how, the why, and the wherefore of the training of feeble-minded children, M. W. Barr.—The value of nature study in sense training, E. R. Johnston.—Minutes of 23d annual meeting of the association of medical officers of institutions for idiotic and feeble-minded persons in N. Y. C.

WESTERN MEDICAL REVIEW, Lincoln, Neb. (10). November: Vesical calculus in the female, with report of a case, C. C. Meyer, Lincoln.—Treatment of hernia in the aged, C. C. Allison, Omaha—Thrombus neonatorum, F. A. Butler, Harvard, Neb.—Lithiasis, R. A. Bate, Louisville.—Adenoids neglected and some of the results, M. H. Garten, Lincoln.—Value of prostatic examination, J. L. Boogher, St. Louis.—Some ocular and aural manifestations of hysteria, H. Gifford, Omaha.—Displacements of the pregnant uterus, A. B. Anderson, Pawnee City, Neb.—Paper braces in orthopedic surgery, F. M. Gardner, Lincoln.—Do we always do as well as we know in obstetric practice, J. L. Sutherland, Grand Island, Neb.—Iron in anæmia, E. J. Angle, Lincoln.—Abortion (III), A. D. Wilkinson, Lincoln.

MARITIME MEDICAL NEWS, Halifax. October: Enteroptosis and its relation to functional disturbances (illustrated), W. F. Hamilton, Montreal.—A case of penetrating gunshot wound of the abdomen with lesions of intestines successfully treated by immediate operation, N. E. McKay, Halifax.

MEDICAL SUMMARY, PHILA. (10). November: The non-surgical treatment of hemorrhoids, M. P. Creel, Central City, Ky.—Seasonable pointers, B. W. Swaine, Berwick, Pa.—Position in third stage of labor, S. Hubbard, Hudson, Ill.—Eosemetric treatment of typhoid fever, W. C Buckley, Phila.—Treatment of infantile colic, C. E. Tucker, Joppa, Ill.—Stimulant vs. sedative, B. H. Brodnax, Brodnax, La.—My experience with pulmonary tuberculosis, J. B. Patterson, Washington.

OCCIDENTAL MEDICAL TIMES, San F. (20). October: Commercialism in medicine, an address, R. F. Rooney.—Two cases of spontaneous rupture of the heart, with demonstrations of specimens, A. W. Hoisolt, Stockton, Cal.—Rachitis, G. L. Eaton, Oakland.

NORTH AM. JOUR. OF DIAG. AND PRACTICE, St. Louis. (10). November: Circumcision, J. L. A. Buechler, Rich Mountain, Mo.—A contribution to the treatment of gonorrhea and simple urethritis, C. H. Powell.—A new method of treating dermatic disorders, W. H. Vail.

MEDICAL REGISTER, Richmond. (15). October: Gastrostomy for traumatic stricture of the esophagus, report of a case, G. B. Johnston, Richmond.—Gastric lavage, R. F. Williams, Richmond.—Penetrating injuries of the eye-ball, J. R. Davidson, Richmond.—Remarks upon ovarian tumor with twisted peduncle, with report of eight cases, M. H. Richardson, Boston.

UNIVERSITY MEDICAL, Galveston. (15). October: Address to students, J. W. McLaughlin.

PENN. MEDICAL JOURNAL, Pittsburg. (25). October: Medical achievements of the present century, retiring president's address, J. W. Roop.—Chronic renal disease, E. G. Matson, Pittsburg.—Some of the effects of our present methods of teaching of anatomy in our medical schools. E. W. Holmes, Phila.—A specific treatment for typhoid fever, C. D. Miller, Pottsville.—Address in hygiene, the propagation of disease by means of insects with special consideration of the common domestic types, W. M. L. Coplin, Phila.—Pulmonary tuberculosis with intercurrent typhoid fever complicated by pneumonia, triple infection, A. A. Eshner, Phila.—The treatment of pneumonia, L. F. Flick, Phila.

NATIONAL MEDICAL REVIEW, Washington. (10). November: Four cases of appendicitis, W. C. Borden, U. S. A.

INDIANAPOLIS POLICLINIC. (15). November: Psychotherapeutics. J. M. Thurston.—Pernicious malarial fever, N. D. Woodard, Indianapolis.j—Introductory lecture on surgery, E. M. Haggard, Indianapolis.—Typhoid fever, E. A. Secoy, Frost, Ohio.—Physiomedicalism, J. M. Thurston, Richmond, Ind.

KANSAS CITY MED. INDEX-LANCET. (10). November: Nuclean therapy in typhoid fever, J. M. Latta, Millerton, Kan.—Importance of elimination as shown by a case specimen, C. L. Hall, K. C.—Grip, T. R. Thornton, Lee's Summit, Mo.—The ovaries, B. Robinson, Chicago.—Review of recent advances in our knowledge of the anatomy and physiology of the nervous system, by the editor, John Punton.

MEDICAL SENTINEL, Portland, Oregon. (25). November: The province of the country physician, an address by C. W. Shaff.—Brief history of tobacco and its effects upon the system, E. H. Thornton, Portland.—Ocular headache, I. P. Balabanoff, Tacoma.

KINGSTON MEDICAL QUARTERLY, Canada. October: The Canadian Medical association (ed.).—The late Mr. Lawson Tait (ed.).—President's address, J. Herald, Kingston.—Imperforate hymen, C. B. Dyde.—The distribution of anthrax in Ontario, W. T. Connell.—Notes on the use of normal salt solution, Isaac Wood.—"Indigestion," G. W. Mylks.—Traumatic rupture of the bile duct, R. W. Garrett.

ARCHIVES OF PEDIATRICS, N. Y. C. (30). November: Some clinical features of rheumatoid arthritis, R. T. Taylor and S. H. Mokim, Baltimore.—A case of meningitis due to the typhoid bacillus, A. H. Wentworth, Boston.—On vaccination, F. Forchheimer, Cin.—Incontinence of urine in children, F. Huber, N. Y. C.—A new binaural stethoscope for the examination of infants and children, H. Koplik (illustrated), N. Y. C.—Scurvy in an infant of six weeks, F. M. Crandall, N. Y. C.—The position of antenatal pathology (introduction to a series), J. W. Ballantyne, Edinburgh.—A case of acute iodoform poisoning, B. B. Mosher, Brooklyn.—Subnormal temperature during an attack of malaria, C. G. Lucas, Louisville.—Rheumatism in a young infant, E. Marshall, Louisville.

THE PLEXUS, Chicago. (10). October: About peritoneal adhesions, T. A. Davis (with portrait), Chicago.—Parasitic origin of tumor, W. E. Coates.—The value of clinical observation of skin-diseases for the medical students, E. A. Fischkin (with portrait).

AMERICAN JOURNAL OF INSANITY. October: Presidential address, the teaching of psychiatry, Henry M. Hurd.—Remarkable mental contagion and infection inherited or acquired, with consideration of some measures of prevention of insanity and degeneracy, Richard Dewey.—Judicial errors in lunacy, Geo. Villeneuve and E. P. Chagnon.—Thyroid extract, a review of the results obtained in the treatment of one thousand and thirty-two collected cases of insanity, W. Mabon and W. L. Babcock.—The relation of renal diseases to mental derangement, W. L. Worcester.—The imagination in relation to mental disease, R. H. Chase.—Some inconsistences, legal and medical, about insanity, J. T. Searcy.—The practical value of prophylaxis in mental disease, A. B. Richardson.—The psychology of criminals, and a plea for the elevation of the medical service of prisons, J. B. Chapin.—Haematoporphyrinuria, with report of a case following the use of trional, R. E. Ruedy.

THE JEFFERSONIAN, Phila. (15). November: J. Morrison Sims, the father of gynecology, W. Krusen.—Full-page portrait of J. M. De Costa, a professor of the Jeffersonian Medical College.

JOURNAL OF EYE, EAR AND THROAT DISEASES, Baltimore. (10). October: Innocently acquired syphilitic infection of the throat, F. R. Packard, Phila.—Therapeutics of infectious conjunctivitis, D. S. Reynolds, Louisville.

MEDICAL REGISTER, Richmond. (15). September: Yellow fever in Virginia. C. M. Hazen, Bon Air, Va.—Preservatives in fresh milk, J. M. Whitfield, Richmond.—Report of a case of labor complicated by puerperal convulsions and small-pox, W. Hoskins, Newport News, Va.—Glycerine as a sterilizer of vaccine lymph, E. C. Levy, Richmond.—Does medical education pay (ed.).

MEDICAL TIMES, N. Y. C. (20). November: Blood examination, A. L. Benedict, Buffalo.—The diagnosis of appendicitis, F. T. Merriwether, Asheville. Detection of small quantities of albumin in urine, C. Mitchell, Chicago.—Pleural effusion and their management, M. E. Fitch, Phila.—A study of etiology and treatment of chorea, L. J. Smith, Phila.—Recent ideas regarding the local treatment, and the use of the salicylates in rheumatic fever, R. W. Wilson, Phila.

AM. JOUR. OF SURG. AND GYN., St. Louis. (10). October: Hernia following abdominal operations, its prevention and cure, A. L. Smith, Montreal.—Observations on the relation of the uterus to the thyroid gland, C. R. Dickson, Toronto.—Surgery among the insane, its difficulties, its advantages, its results, S. T. Hobbs, London, Ont.—A peculiar gynecological case, T. S. Harrison, Selkirk, Ont.—Mania and melancholia due to pelvic trouble, T. K. Holmes, Chatham, Ont.—Kraurosis vulvae, with notes of three cases, H. Meek, London, Ont.—Some cases of obstruction of the bowel, J. Perrige, Montreal.—Drug habit following surgical operations, C. E. Patterson, Grand Rapids, Mich.—The soldier and the surgeon, G. Ryerson, Toronto.

MEMPHIS LANCET. (10). November: Rectal feeding in connection with the treatment of ulcus ventriculi, A. G. Jacobs, Memphis.—A new gall-stone scoop (illustrated), M. B. Herman, Memphis—the significance of laceration of the cervix uteri, H. O. Panther, Indls.—A report of the eye and ear cases treated at the city (Memphis) hospital in May and June, H. Boyd.—Gunshot wound of the superficial femoral artery and vein, J. M. Maury, Memphis.—Superheated air in treatment of disease, M. Goltman, Memphis.—Standardization of drugs (ed.).—So-called Christian science (ed.).

MEDICAL HERALD, St. Joseph. October: Intestinal auto-intoxication, its prevention and treatment, F. W. Barclay, Pittsburg.—Scrofulous diathesis, A. E. King, Blockton, Ia.—Death by electricity, F. E. Coulter, Omaha.

MEDICINE, Detroit. (20). November: The treatment of goitre, A. I. Bouffleur, Chicago.—Remarks on the diagnosis of locomotor ataxia, H. T. Patrick, Chicago.—Acute frontal sinusitis, H. L. Swain, New Haven. Conn.—General surgical anesthesia and anesthetics, E. J. Mellish, Chicago.

WISCONSIN MEDICAL RECORDER, Janesville. (10). October: Sprains of the ankle, E. C. Hinman, Akron, Ohio.—Post partum atony and subinvolution of the uterus, E. C. Rotbrook, Jacksonville, Texas.—Health and happiness, W. H. Gray, Michigan City, Ind.—Reciprocity between medical state boards, H. Speier, Janesville, Wis.—Malaria, geographical distribution, theory of causation, J. W. Lockhart, St. John, Wash.

NEW YORK LANCET . (10). October: Management of difficult breech labors, A. H. Wright, Toronto.—Diet in typhoid fever and the typhoid state, W. H. Dickinson.—Intestinal obstruction, R. C. Elsworth.—Treatment of abdominal palpitations, W. Wade, Florence.—Treatment of coryza, W. E. Burton.—The surgical sequelae of influenza, J. W. Haward.

November: Notes on some interesting skin lesions in practice. G. G. Melvin, St. John, N. B.—Obstinate hiccough, H. E. Belcher, West Bridgford.—The application of the Roentgen rays to medicine and surgery, C. M. Moullin.

AMERICAN MEDICAL QUARTERLY, N. Y. C. (60). September: Functional cardiac murmurs, A. Jacobi, N. Y. C.—Appendicitis: its surgical treatment, J. Price, Phila.—Crystoid disease of the testicle; teratoma testis, F. R. Sturgis, N. Y. C.—Does sepsis play a prominent causative role in the production of puerperal insanity, E. N. Brush, Baltimore.—Heart disease from an obstetrical point of view, A.H. Wright, Toronto.—Experiences in intestinal surgery, M. D. Mann, Buffalo.—Hygiene of the bed room and bedstead, Lawson, Tait.—Newspaper medicine, N. W. Wilson, Buffalo.—Full page portrait of J. D. Bryant, president of the New York state medical association.

BUFFALO MEDICAL JOURNAL. (20). November: The student in medicine, W. H. Heath, Buffalo.—A report of the operative treatment of several cases of frontal and maxillary sinusitis, F. W. Hinkel, Buffalo.—Subphrenic abscess, P. LeBreton, Buffalo.—House-to-house operating, E. Ricketts, Cin.—The duty of the general practitioner toward the specialist, E. L. Mooney, Syracuse.—Pen pictures of malaria, N. W. Wilson, Fort Porter, N. Y.—False reports credited as military news (ed.).—How Michigan defines the practice of medicine (ed.).—Mortality statistics in the twelfth census (ed.).

MEDICAL REVIEW OF REVIEWS, N. Y. C. (10). October: General medical reviews, 36 pp.—The natural and the artificial menopause, C. A. L. Reed, Cin.—Index-medicus classified by subjects, with 900 classifications.

CHARLOTTE MEDICAL JOURNAL. (25). October: Observations on the relation of the uterus to the thyroid gland, C. R. Dickson, Toronto.—An arm saved after bein run over and crushed by a railroad locomotive, S. L. Kilmer, South Bend, Ind.—Consumption among the poor, E. J. Barrick, Toronto.—Some points on diagnosis and treatment of typhoid or enteric fever, W. L. Sumner.—Extreme emaciation in hysteria, with notes of a case,T. Beath, Winnipeg.—Tuberculosis and insurance, J. Hunter, Toronto.—Report of a case of complete hernia of the uterus, W. V. Anderson, Toledo.—Asphyxia and its treatment, L. B. McBrayer, Asheville.—Acromegaly and African sleeping disease, S. K. Crawford, Chicago.—A review of the different forms of treatment of neurasthenia, C. W. van Bergen, Asheville.—100 abstracts from the leading journals.

MEDICAL BULLETIN, Phila. (15). November: An introductory address delivered at the Medico-Chirurgical college, C. W. Burr, Phila.—Tinea capitas Psoriasis, by the editor, J. V. Shoemaker.—Menstruation following supravaginal hysterectomy, W. E. Ashton, Phila.—Heroin, I. Otis, Phila.

AMERICAN X-RAY JOURNAL, St. Louis. November: The Wehnelt interrupter in x-ray work, B. F. Bailey, Ann Arbor, Mich.

MEDICAL MIRROR, St. Louis. (10). November: Memorial address on the life and character of Lawson Tait, C. A. L. Reed, Cin.—Further observations on the treatment of the abdominal viscera through the colon, F. B. Turok, Chicago.—The food value of fats, by the editor, I. N. Love.—Indigestion in infants and children, J. H. Taylor, Indls.—House to house operating, E. Ricketts, Cin.—The sink problem, W. H. Dade, U. S. A., Manila.—Recollections at the 33d mile post in my medical career, W. F. Barclay, Pittsburg.—Popular fallacies in and out of the profession, regarding venereal diseases (ed.).—Hypo-quinidol (Gardner). A new form of quinine superior to sulphate (ed.).

MEDICAL COUNCIL, Phila. (15). November: About vaginal pessaries (ed.).—Cold water and associated treatment of pneumonia (ed.).—The eye: how it sees; its defects, and their cure with glasses (first paper), A. H. P. Leuf, Phila.—Vicarious menstruation, B. Edison, Brooklyn.—The use of carbolic injections in cellulitis and other conditions, E. L. Paulding, Arroyo Grande, Cal.—Treatment of inebriety, T. D. Crothers, Hartford, Conn.—Urinalysis and nephritis, I. Lindenberger, Louisville.—Nasal hemorrhage (3d paper), E. B. Gleason, Phila.

BROOKLYN MEDICAL JOURNAL. (25). November: Notes on tubercular kidney and post-operative anuria, J. O. Polak, N. Y. C.—An interesting case of heart disease, C. Chase, Brooklyn.—Traumatism of the calvarium and its contents, G. G. Hopkins.—Remarks on modern foot-clothing (illustrated), B. B. Mosher.—Public money for charities (ed.).—Typhoid mortality in the U. S.—Reports of several interesting cases at meeting of Brooklyn surgical society.—Therapeutics: past, present and future, G. F. Butler, Chicago.

MEDICAL RECORD, N. Y. C. (10). October 28: State care of consumptives, with an account of the first state hospital for tuberculosis in this country (illustrated), A. Meyer, N. Y. C.—The sphere of drainage in surgery of the appendix, W. S. MacLaren, Litchfield, O.—A brief history of five cases of mastoiditis, R. Lewis, N. Y. C.—Major and minor technique of Bassini's operation, as performed by himself, E. W. Andrews, Chicago.

November 4: The fourth hitherto undescribed disease of the ovary, colloid degeneration (illustrated), M. A. D. Jones, N. Y. C.—Congenital hernia of the umbilical cord (illustrated), W. B. Coley, N. Y. C.—Backaches due to eye strain, J. C. Hancock, Brooklyn.—Lap-reading, an aid for the incurable deaf, Cora D. Gorton, N. Y. C.

November 11: Ten years' experience with typhoid fever at the Roosevelt hospital, W. H. Thomson, N. Y. C.—Electricity in respiratory and cardiac failure, with a case of paralysis of the diaphragm, A. D. Rockwell, N. Y. C.—The etiology of scarlet fever, H. O. Hall, U. S. A.—Iodide of potassium in the treatment of acne, F. J. Leviseur, N. Y. C.—Entrance of air into the circulation, J. D. MacPherson, Akron, Ohio.

November 18: Tabes dorsalis, its pathology, diagnosis and treatment, C. I. Dana, N. Y. C.—The pathogenesis of functional nervous diseases and their prophylatic indication, J. Punton, Kansas City.—Ophthalmic contributions, D. Webster, N. Y. C.—The necessity for state aid in pulmonary tuberculosis, G. W. Goler, Rochester.

MEDICAL BULLETIN, Phila. (10). October: Lupus vulgaris, a clinical lecture, J. V. Shoemaker, the editor.—Primary tuberculous periostitis of the margin of the orbit, C. Mazet, Marseilles, France.—The paranoia of pubescence, of hebephrenia, with report of a case, H. B. Mills, Phila.—The British medical association (ed.).—The derivatives of vanadium in therapeutics (ed.).

ST. PAUL MEDICAL JOURNAL. (25). September: Tuberculin as a diagnostic agent in tuberculosis, G. Douglas Head, Minneapolis.—Drainage of the bladder through a catheter in the urethra, A. T. Cabot, Boston.—What evidence have we in support of the theory that epilepsy is due to an auto-intoxication? T. B. Futcher, Baltimore.—Membranous conjunctivitis, T. McDavitt, St. Paul.

October: Small pox, F. Leavitt, St. Paul.—Events in the history of medicine, F. Staples, Winona.—A case of left-sided appendicitis, complicated by intestinal obstruction, W. E. Ground, West Superior.—Aneurism, C. H. Mayo, Rochester.

NEW YORK MEDICAL JOURNAL. (10). October 28: The relation of pathological conditions of the ethmoid region of the nose to asthma, H. L. Swain New Haven.—The cause of death from industrial electric currents (concluded), R. H. Cunningham, N. Y. C.—A case of fibro-lipoma of the tonsil, with microscopic section, T. A. DeBlois, Boston.—Dry heat of high degree as a therapeutic agent, C. E. Skinner, New Haven.—Alcoholism, C. J. Douglas, Boston.—Report of a case of abscess of the anterior surface of the epiglottis, A. C. Howe, Brooklyn.—Palatable quinine mixture for children, W. J. Greanelle, N. Y. C.

November 4: How to preserve as permanent specimens casts found in urine, L. N. Boston, Phila.—The medical history of Sir Walter Scott, R. Bartholow, Phila.—The pathology and therapy of cancer, with special reference to cancer of the stomach, A. C. Bernays, St. Louis.—Home modification of cow's milk for infant feeding, H. D. Chapin, N. Y. C.—Notes on urethral catheterism, catheters, and bougies (to be continued), J. W. S. Gouley.—The Sheldon murder trial, a review of the medical evidence relating to pistol shot wounds of the head (to be continued). C. Phelps, N. Y. C.—The diagnosis of typhoid fever, W. Osler, Baltimore.

November 11: The bath treatment in typhoid fever, H. E. Ballard, Waterbury, Conn.—The relation of pathological conditions in the ethmoidal region and asthma, C. C. Rice, N. Y. C.—The relation of pathological conditions in the ethmoid region of the nose and throat, E. F. Ingalls, Chicago.—Brain fatigue, R. Ellis, Utica, N. Y.—The treatment of epidymitis, R. C. Kenner, Louisville.

November 18: An interesting case of syphilitic leucoderma, or dungeon scurvy, closely simulating anæsthetic mascular leprosy (illustrated), J. A. Silverman, San Francisco.—An unusual accident (illustrated), E. Marshall, Louisville.—Further experimental researches on the effects of different anesthetics on the kidneys (illustrated) (to be continued), R. C. Kemp.—The relation of pathological conditions in the ethmoid region of the nose and asthma, treatment, F. H. Bosworth.

ST. LOUIS MED. AND SURG. JOUR. (10). November: The squamous palmer syphulide, A. H. Ohmann-Dumesnil, St. Louis.—Collective reports on glycerinated vaccine lymph, A. C. Barnes, Phila..

ST. LOUIS MED. GAZETTE. (10). October: Physiological, or rational, treatment for typhoid fever, "cruelty" and "danger" of the cold bath method, C. E. Page, Boston.

JOUR. OF SCIENTIFIC MED., Chicago. (10). October: A suggestion in the "open air" treatment of consumption, A. Abrams, San Francisco.—Value of prostatic examination, J. L. Boogher, St. Louis.—Modern surgical treatment of hemorrhoids, by the editor, G. M. Blech.—The care and prevention of prostitution, H. Greenberg, Milwaukee.

MED. AND SURG. MONITOR, Indls. (10). October: Epidemic cerebro-spinal meningitis, W. T. Newton, Indls.—Treatment of cerebro-spinal fever, B. F. Chambers, Westphalia, Ind.

VIRGINIA MED. SEMI-MONTHLY, Richmond. (10). October 27: Needed legislation with reference to non-graduates before medical examining boards (an address), J. Michaux, Richmond.—The ideal physician (an address), L. Lankford, Norfolk.—Syphilis and life insurance, A. H. Kelch, Louisville.—The prevention of small-pox, T. M. Baird, Christiansburg, Va.—Therapy of the nitrates, J. N. Upshur, Richmond.—Therapeutics of kola, C. C. Yarbrough, Detroit.—Lithiasis, R. A. Bate, Louisville.—A case of septicemia, treatment, F. J. A. MacDonald, Detroit.—The new and the old, R. H. Bell, Atlanta.—Further observations on the treatment of the abdominal viscera through the colon, F. B. Turck, Chicago.—Modern surgical treatment of hemorrhoids, G. M. Blech, Chicago.

November 10: How best, in every way, to promote the health of our children in the public schools, J. H. Neff, Harrisonburg, Va.—Hygiene of the school room, Hugh McGuire, Alexandria, Va.—Care of the eyes of school children, A. C. Palmer, Richmond.—School hygiene, adapt studies, etc., to conditions, J. H. Claiborne, Petersburg.—School room diseases, F. Horner, Marshall, Va.—Abdominal surgery with special reference to work in private homes, C. Hamilton, Rome, Ga.—Backache, R. Douglas, Nashville.—Operation on the cervical ganglia of the sympathetic, for epilepsy, glaucoma and exophthalmic goiter, E. Lanphear, St. Louis.

CINNAMON AN ANTISEPTIC.

Dr. C. G. Grant, in British Medical Journal, argues that cinnamon has important antiseptic powers, this fact being demonstrated by the absence of malaria in employes of the cinnamon gardens of Ceylon. He advises its use in recurrent boils, gastro-enteritis, influenza and typhoid fever.

Habitual abortion may be due to either constitutional causes, syphilis, lead poisoning, tobacco poisoning, or heart disease or to local causes, uterine displacement, active congestion of the uterus, diseases of the cervix or body of the uterus, or to malformations of the uterus. It is well to remember that of all the causes of habitual abortion syphilis is easily first, and use specific treatment.

In phosphorus poisoning sulphate of copper performs the office of an emetic, and that of a chemical antidote by forming the phosphide of copper.

The favorable results obtained by administration of the preparations of blackberry for diarrhea are attributable to the tannic acid it contains, which is in the proportion of 10 per cent. The dose of the fluid extract is dr. ss, and the aromatic syrup dr. 1 to 4. The latter also contains allspice, nutmeg, cinnamon and cloves, which act as adjuvants.

A pinch of sugar or salt, especially the latter, placed upon the tongue before taking a nauseating medicine, will sometimes mask its unpalatableness.

An international congress of deaf-mutes is to be held in Paris during the Exposition.

The whole estate left by the late Lawson Tait has been valued at $47,850, and his personal estate at nil; all bequeathed absolutely to his wife. He was supposed to be worth much more.

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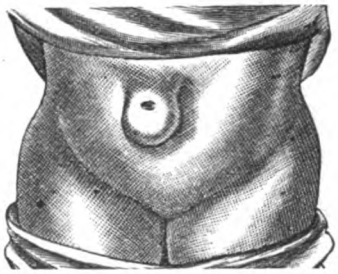

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PUBLISHER'S DEPARTMENT.

A CONTRIBUTION TO THE THERAPEUTICS OF PEPTO-MANGAN, "GUDE."

By Dr. Ludwig Pohl, City Physician of Vienna, Austria.

It is about five years ago that I first had occasion to test Gude's Pepto-Mangan. The curative results obtained from its use were so surprisingly good that I decided to thoroughly experiment with this preparation on my abundant clinical material, the outcome of which is reported in this article.

The number of remedies introduced every year into the market are so numerous that for this reason alone it would be impossible to employ all of them, even if only experimentally, or to make a careful choice. Pepto-Mangan appealed to me strongly in the first instance for reasons that I shall explain. Although inclined to think well of this preparation from the first, I would remark that my observations were instituted without bias, and that my investigations were carried out in a strictly scientific manner.

I was led to make a thorough study of this preparation by the subjective statements of the patients that it never caused the least disturbance, the objective evidences of improvement, and, besides these, by the following considerations:

According to the views of many authors, iron preparations, to be efficient, must exert not only a local but distant, that is, general effect. In chlorosis and in many severe cases of anæmia chalybeates are said to remove the hydrogen sulphide, formed frequently in large amount in the alimentary tract, by the combination of the iron with the sulphur. This removal is necessary, because hydrogen sulphide, if present in too large quantity, renders impossible the absorption of the iron in the food by precipitating it in the form of sulphide of iron. It is known, however, that not only iron but also manganese is adapted in a high degree for taking up hydrogen sulphide. Manganese therefore acts as an auxiliary to iron in this respect.

Another circumstance was decisive for me. A large number, almost all, of the officinal ferruginous preparations are absorbed only to a slight extent when administered internally. This can be maintained on the ground of the fact, that in animals and human beings positive evidence of the entrance of these preparations into the blood cannot be obtained if the persons experimented with have not intestinal catarrh or have not received excessive doses of iron. The more the preparation approximates to the form in which iron is contained in the food, the more likely it is to be absorbed. The peptonizing of an iron preparation is therefore of decided advantage, as its absorbability and assimilability is thereby enhanced to a considerable degree. Aside from this, the peptone combination is adapted for exerting the systemic effect. This general action of iron preparations only takes place if after absorption they undergo conversion into hemoglobin. Hence this conversion is only possible in the case of preparations which contain iron in form of an organic combination. They will then act even when containing a much smaller percentage of absolute iron.

It was therefore the chemical constitution of the preparation which appealed to me, and which induced me to undertake extensive experiments.

The cases in which I employed Gude's Pepto-Mangan comprised chiefly the poorer class of people. I mention this particularly, because with these patients it is difficult or well-nigh impossible to pay attention to the hygienic conditions or to consider the dietic side of the treatment. Notwithstanding this, the results were favorable. Of course, they were most satisfactory in the case of those patients who were also able to carry out the hygienic and dietic regulations.

Numerous cases of chlorosis, anæmia, neurasthenia, and hysteria, as well as two cases of malarial cachexia, were submitted to careful and thorough observation.

In many cases determinations of the bodily weight, measurements of the blood pressure, estimates of the hemoglobin percentage, and blood counts were made.

As regards the bodily weight, I observed in sluggish, obese, chlorotic patients a reduction in flesh as well as improvement of the general state. The high absorbing power of the preparation and its ready conversion into hemoglobin increases the oxygen capacity of the blood; pari passu with this there is an improvement of the metabolism, the oxidation, which takes place at the expense of the non-nitrogenous elements of the body, that is, the adipose tissue. In the case of lean persons I combine with this treatment rest in bed for several weeks, to which may be ascribed the increase of bodily weight observed.

There was a constant change in the conditions of blood pressure. In almost all the chlorotic patients the blood pressure, estimated by Basch's sphygmomanometer, became considerably higher. In many of my cases I noted improvements in the blood pressure of 40 to 60 millimetres in the course of four weeks. Besides this, the fluctuations of blood pressure, so frequently observed during changes of position, disappeared; the pulse frequently diminished considerably;

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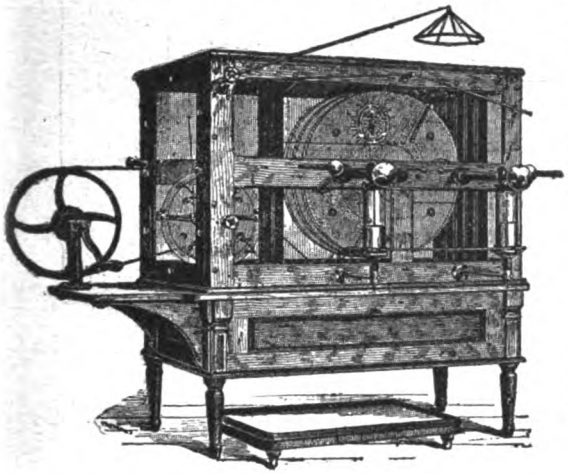

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and the subjective disturbances connected with the circulatory apparatus, especially the troublesome palpitation of the heart, subsided. I would remark that this amelioration occurred under the use of no other remedy in so short a time as under that of Pepto-Mangan.

In judging of the value of an iron preparation, conclusive evidence is afforded by estimates of hemoglobin and blood counts. To determine the hemoglobin I employed Fleischl's hemoglobinometer, and as a solvent a 0.6 per cent sodium chloride solution; for blood counts I made use of the apparatus of Thoma-Zeiss and a 2.5 per cent solution of potassium bichromate for the red blood corpuscles; the white were not counted.

To demonstrate the changes in the hemoglobin and in the number of red corpuscles, I report here the history of a girl, 16 years old, affected with marked chlorosis. The disease was of almost two months' duration and attended with general functional disturbance. There were present mental anxiety, a disinclination to work, to enjoy life, or move about, marked muscular weakness, cardiac palpitation, difficulty in breathing, loss of appetite, headache, vertigo, restless sleep alternating with sleeplessness. The patient came from healthy parents, had previously been always healthy, and menstruated for the first time in her fifteenth year, but scantily and irregularly. Marked pallor of the skin and mucous membranes was noted; the lungs were normal. The area of cardiac dulness was enlarged toward the right side; blowing murmurs were heard over all the valves, and a bruit over the jugular vein. The radial artery was very small and soft; the pulse frequently 110. The spleen and liver were normal in size; there were no glandular swellings; the bones were not tender to pressure. The urine contained no abnormal constituents.

The percentage of hemoglobin in the blood was 35 per cent; the number of red blood cells, 2,700,000 to the cubic millimetre. The white cells were not increased; otherwise the condition of the blood was normal.

The treatment was as follows: The patient was advised to live on a mixed diet, with an abundance of fresh air and moderate out-door exercise. She also took three teaspoonfuls of Pepto-Mangan daily.

The increase of hemoglobin and of the number of red corpuscles is shown in the following:

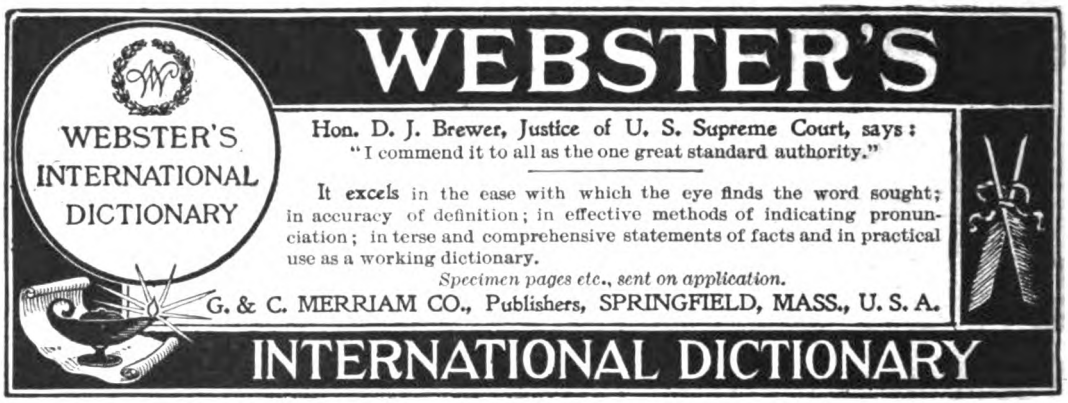
At the end of the first week, 45% hemoglobin, 3,260,000 red corpuscles to the cubic millimetre; second week, 60% 4,100,000; third week, 70% 4,500,000; fourth week, 75%; 4,900,000.

Before proceeding with the history of this case I would emphasize the fact that the number of red blood cells increased more than one and one-half million, while the increase of hemoglobin amounted to more than 100 per cent. Such marked improvement in the condition of the blood under the treatment with Gude's Pepto-Mangan was not unusual, but rather the rule in chlorosis. And it may be assumed with certainty that the above-described effect is attributable to the high absorbability of this preparation as compared with the numerous other chalybeates, and, further, to the combined action of iron and manganese upon the blood-forming organs. I would add that numerous investigators, such as Hannan, Kugler, and many other authors, have called attention to the important part played by manganese both in the blood and as a hematogenic remedy.

In the case under consideration there was a perceptible improvement in the patient's subjective and objective state. The existing disturbances subsided gradually; the cardiac palpitation, loss of appetite, and sleeplessness disappeared, and after four weeks' treatment she was discharged cured.

It is not the purpose of this report to detail numerous histories of cases, and I shall content myself with briefly mentioning that I have treated more than 100 cases of chlorosis with Gude's Pepto-Mangan with as good results as those above described, except that in some instances the results did not appear as promptly. The fact cannot be sufficiently emphasisized that during the entire course of treatment the remedy did not have to be discontinued on a single occasion, although this must be often done with other ferruginous preparations. I never heard a complaint that the preparation was not well tolerated; on the contrary, the patients stated that they did not experience the slightest disturbance even during its prolonged use, and that it acted mildly, was well borne, caused no disturbance of digestion, but rather promoted the latter, and was free from any disagreeable taste.

I have previously mentioned that it may be positively assumed that Pepto-Mangan stimulates the hematopoietic organs to increased activity. Numerous blood findings discovered casually by me the appearance of the so-called immature forms of blood corpuscles, constrain me to take this view. Of much greater importance is the circumstance, however, that in numerous diseases of the blood occurring in connection with the lymphatic and blood-making organs I have derived excellent results from Gude's Pepto-Mangan.



Decided amelioration in the leukæmic state, arrest of the process in severe cases for a long time, reduction of the glaudular swellings, improvement in the relation between the red and white corpuscles, were noted by me in several cases under my care.

In my opinion, the value of ferruginous preparations in neurasthesnia and hysteria has received too little consideration. The success of a rational therapy depends upon an effective application of all methods of treatment and remedies which enable us to combat the entire group of symptoms. An easily absorbable ferruginous preparation is of incontestable benefit, and I believe that Gude's Pepto-Mangan occupies a prominent place in this connection. It is not my intention here to institute comparisons with various iron preparations. I would emphasize, however, for reasons already mentioned and which are especially based upon the composition of Gude's Pepto-Mangan, that I prefer the latter preparation, and have employed it successfully in all conditions where it is necessary to improve the quality of the blood.

In conclusion, I would mention that I have obtained excellent results from Gude's Pepto-Mangan in two cases of severe malarial cachexia. In the one case the treatment occupied three weeks, in the other five weeks. Both cases were cured. It is of interest that in the first case, in which a malarial attack had not occurred for some time, a typical paroxysm with rigor, fever, and sweats developed after one week's treatment. The attack failed to recur, and for this reason I was unable to search for plasmodia. I am not disposed to overestimate this occurrence, nor to make it the subject of theoretical reflections. I am decidedly of the opinion, however, that this attack is attributable to an influence of Pepto-Mangan upon the spleen.

In all particulars Pepto-Mangan is an excellent preparation, which bids fair to occupy a permanent place in the materia medica. I would be pleased if through this article I had directed attention to this valuable remedy, and incited others to undertake experiments and report their observations.

The McArthur Hypophosphite Co. appeal entirely to the reason and educated sense of the physician in their admirable advertisement. Their syrup is a standard and reliable preparation. It is not a conglomerate mass of poly-pharmacy as some others in the market, but embodies the valuable therapeutical properties of the Hypophosphites of Lime and Soda, without objectionable ingredients, and is particularly adapted to children.

The opium habit prevails among Europeans in the East to an extent which is appreciated only by those who are brought into contact with its victims. In view of this fact the announcement by McLeod, of Shanghai, that it is possible to cure the habit by the administration of sodium bromide, is indeed welcome news. He gives the drug in two doses of 2 drachms, in solution, every two hours for the first two days, and 1 drachm on the third day. Two ounces in all will probably suffice in most cases.—Med. Times.

Joel Parker, aged eighty-four years, a veteran of the Civil War, was buried in Ocean Grove, N. J., June 11. He had been twice married and was the father of twenty-four children, all of whom were present at the funeral. The oldest child is sixty years of age and the youngest six months.

The latest reported German invention is a "beer tablet." The beverage is dried and compressed, and when water is added to the tablet carbonic acid gas is formed, so that a foaming beaker is produced, as good, it is said, as if freshly drawn from the barrel. It is non-alcoholic, of course.

In the Diagnosis of Appendicitis Prof. Keen lays great stress on tenseness of the abdominal muscles on the right side and pain reflected to the right side when pressure is made over the left side. He lays far more stress on the condition of the pulse than on the temperature in cases where abscesses form. He seldom gets the fluctuation from pus when palpating the abdomen.—Dunglinson's Record.

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A mixture of borate of soda and milk is recommended by a Parisian chemist as the best general antidote. It should be given the first thing after emptying the stomach. For vegetable poisons, the best antidote is a 1 per cent. solution of permanganate of potash.

Hoveloch, a celebrated French author, in his "Science of Language," gives us the origin of the word "cadaver," so common to all medical students, in the following manner: It is derived from three words, ca-io, da-ta, ver-mibus, meaning "a body given to worms."

Liquid petroleum is recommended as a mechanical laxative, in quantities of from two to three ounces. Upson considers it absolutely non-irritating, that it does not distend the bowel, nor cause flatulence; indeed, diminishes it, and is easily taken, even by children.

Mrs. Sally Batchelder, of Peabody, Mass., celebrated her one hundred and fifth birthday on August 8. She is reported to have recovered from a fracture of the leg, which she sustained in her one hundredth year.

The widow of a respected citizen of Riga, who died recently, has applied to the court for permission to resume her maiden name, on the ground that the husband with whom she had lived for twenty years was a woman.

An International Congress for the Amelioration of the Condition of the Blind is to be held in Paris, August 1 to 5, 1900. For particulars address the secretary-general, Maurice de Sizeranae, Avenue de Breteuil, 31, Paris.

Mille. Edwardes Pilliet, M. D., is the first woman teacher of medicine in Paris. She is to lecture on physiology to the nurses of the Hospital Lariboisière, and to give instruction in bandaging to the attendants at La Salpetrière.—Med. Times.

The suggestion is offered, in a Paris exchange, that physicians in cities and small towns might obtain change of air and scene with the minimum of loss and expense, by merely exchanging their practices, offices, etc., for a short while.

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THE MINNESOTA FOREST PARK.

So many suggestions regarding the limits of the proposed park have been made as to quite embarrass the officers of the association. Ideas have ranged from a simple enlargement of the State park surrounding Lake Itasca to the reservation of the larger part of northern Minnesota. That the former is not sufficiently extensive an idea to excite enthusiasm is obvious; while it is equally certain that any project which should mean the confiscation of large reaches of arable land, shutting off settlement and preventing the natural development of the state, would find so much opposition as to be impracticable. The largest tract which it has been soberly proposed to set apart for a park contains about 4,000,000 acres and extends 118 miles east and west and about 54 miles from north to south. This would be about the size of the Sierra forest reserve in California and one-half larger than the Yellowstone National Park. But the mountain parks were established in uninhabited wildernesses, while the Minne-

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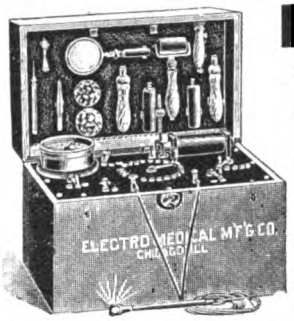

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sota park of these limits would include a score of thriving towns and a total population running well into the thousands. The disposition of the interests of all these people seems an almost unsurmountable obstacle in the way of a great park. Holdings of lumbermen scattered all through the region would prove another difficult problem. Under these circumstances the suggestion that the park be composed at first of only the Indian reservation lands about Leech, Cass, and Winnibigoshish lakes has met with quite general approbation as a compromise plan. These reservations, with some small tracts adjacent and easily acquirable, contain about 800,000 acres, or about one-fifth of the larger area. To secure them the Government would have only to deal with the Indians, and comparatively few established interests would be affected, and such a park would be the nucleus from which future extensions might be made if found desirable.—From "A National Park in the Minnesota Pine Forests," by Horace B. Hudson, in the American Monthly Review of Reviews for December.

WINTER COUGHS—GRIPPAL NEUROSES.

That codeine had an especially beneficial effect in cases of nervous cough, and that it was capable of controlling excessive coughing in various lung affections, was noted before its true physiological action was understood. Later it was clear that its power as a nerve calmative was due, as Bartholow says, to its special action on the pneumogastric nerve. Codeine stands apart from the rest of its group, in that it does not arrest secretion in the respiratory and intestinal tract. In marked contrast is it in this respect to morphine. Morphine dries the mucous membrane of the respiratory tract to such a degree that the condition is often made worse by its use; while its effect on the intestinal tract is to produce constipation. There are none of these disagreeable effects attending the use of codeine.

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"Sing a song of penitence, a fellow full of rye;
Four and twenty serpents dancing in his eye;
When his eye was opened he shouted for his life;
Wasn't he a pretty chump to go before his wife?
His hat was in the parlor, underneath a chair,
His boots were in the hallway, his coat was on the stair;
His trousers in the kitchen, his collar on the shelf
But he hadn't any notion where he was himself;
When the morn was breaking someone heard him call:
His head was in the ice-box, which was the best of all."
Western Druggists' Exchange.

Mr. Horace B. Hudson contributes to the Review of Reviews for December an account of the movement to establish a national forest park in Minnesota, near the headwaters of the Mississippi.

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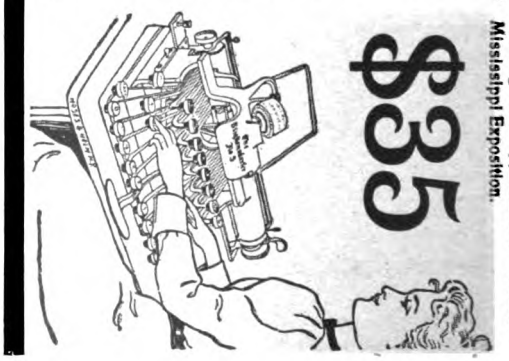

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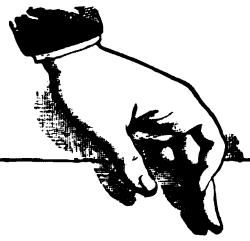

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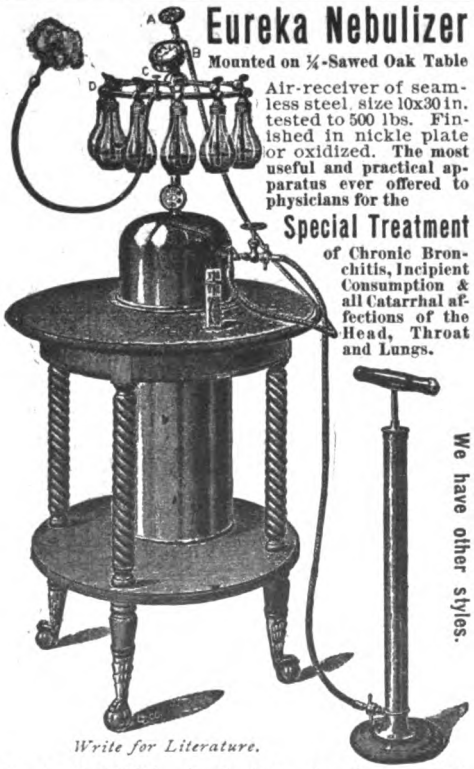

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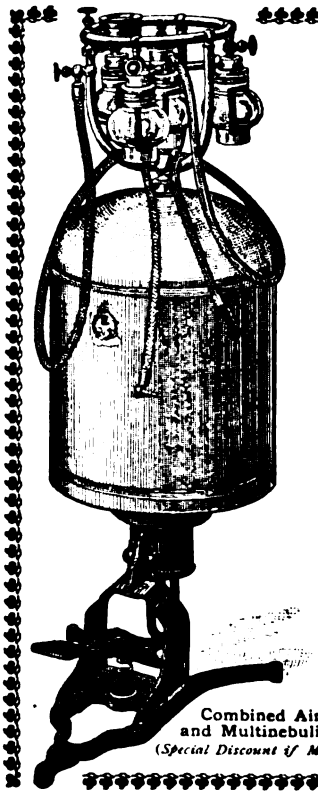

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Battle Creek, Mich., U. S. A.

LIQUOR LITHIUM MAIZENATE.

MAIZO-LITHIUM

SALIENT POINTS. SEDATIVE DIURETIC.

A genito-urinary sedative, an active diuretic; solvent and flush indicated for the relief and prevention of renal colic; a sedative in the acute stages of gonorrhoea, cystitis and epididymitis; in dropsical effusions due to enfeebled heart or to renal diseases. As a solvent in the varied manifestations of gout, goutiness and neurotic lithemia, periodical migrainous headache, epigastric oppression, cardiac palpitation, irregular, weak or intermittent pulse; irritability, moodiness, insomnia and other nervous symptoms of uric-acidemia. Decidedly *better*, more economical, extensive in action and definite in results *than mineral waters.*

In **LITHEMIA** by reason of the neutralizing power of Lithium in combination with Maizenic acid, the superior diuretic.

In **RENAL COLIC** as a solvent and eliminant of uric acid, and prophylactic against future attacks.

In **URETHRITIS** as a urine alkalinizer, and on account of the remarkable sedative action of corn silk upon inflamed genito-urinary mucous membrane.

In **OEDEMA** resulting from cardiac or a renal disease the pulse becomes regular and strong; there occurs marked diuresis and increased proportion of urinary solids.

Those cases of irritable heart, irregular or intermittent pulse so frequently met with by insurance examiners and found to be due to excess of uric acid are special indication for Maizo-Lithum.

Nascent Chemic Union of Maizenic Acid—from Green Corn Silk—with Lithium, forming Maizenate-Lithium. Two grains to drachm. Dose 1 to 2 drachms. 8 oz. bottle, $1.00.

LIQUOR FERRISENIC.

THREE CHLORIDES

HENRY'S.

PROLONGED TREATMENT. FOR THE BLOOD.

An oxygen-carrying ferruginous preparation, suitable for prolonged treatment of children, adults and the aged. Indicated in anemia and bodily weakness, convalescence from acute diseases and surgical operations; boys and girls at the age of puberty, and the climacteric period in women. In children with chorea, rickets or who are backward in development, or in whom there exists an aversion to meats and fats. Prolonged administration never causes "iron headache."

In **CONSTIPATION** as a ferruginous laxative tonic it is effective by increasing the flow of gastric juice and the bile, exciting normal peristaltic movements.

In **CHLOROSIS** it stimulates the formation of iron-containing elements and removes intestinal auto-intoxication upon which the disease often depends.

In **ANEMIA** of all forms as a chalybeate tonic and carrier of oxygen it promotes digestion, aids assimilation of food and increases deposition of fat in the tissues; raises bodily vigor and warmth and has a favorable influence on the nervous system.

As **AN ADJUVANT** for potassium iodide the undesirable manifestions known as iodism can be removed.

Stimulant to the peptic and hydrochloric glandular system of the stomach, especially servicable in the impaired appetite, nauseau, vomiting and other gastric symptoms of alcoholic subjects.

Each drachm contains Proto-Chlor. Iron, 1/8 gr., Bi-Chlor. Mercury, 1-128 gr., Chloride Arsenic, 1-280 gr, Calisaya Cordial. Dose 1 to 2 drachms. 12 oz. bottle, $1.00.

INVALID DIETARY ON APPLICATION.

HENRY PHARMACAL CO.
LOUISVILLE, KY.

SYR. HYPOPHOS. CO., FELLOWS

Contains the Essential Elements of the Animal Organization—Potash and Lime;

The Oxidizing Agents—Iron and Manganese;

The Tonics—Quinine and Strychnine;

And the Vitalizing Constituent—Phosphorus; the whole combined in the form of a Syrup with a **Slightly Alkaline Reaction.**

It Differs in Its Effects from all Analogous Preparations; and it possesses the important properties of being pleasant to the taste, easily borne by the stomach and harmless under prolonged use.

It has Gained a Wide Reputation, particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis and other affections of the respiratory organs. It has also been employed with much success in various nervous and debilitating diseases.

Its Curative Power is largely attributable to its stimulent tonic and nutritive properties, by means of which the energy of the system is recruited.

Its Action is Prompt; it stimulates the appetite and the digestion, it promotes assimilation and it enters directly into the circulation with the food products.

The prescribed dose produces a feeling of bouyancy, and removes depression and melancholy; *hence the preparation is of great value in the treatment of mental and nervous affections.* From the fact, also, that it exerts a double tonic influence and induces a healthy flow of the secretions, its use is indicated in a wide range of diseases.

NOTICE—CAUTION.

The success of Fellows' Syrup of Hypophosphites has tempted certain persons to offer imitations of it for sale. Mr. Fellows, who has examined samples of several of these, **finds that no two of them are identical,** and that all of them differ from the original in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, **in the property of retaining the strychnine in solution,** and in the medicinal effects.

As these cheap and inefficient substitutes are frequently dispensed instead of the genuine preparation, physicians are earnestly requested, when prescribing the Syrup, to write "Syr. Hypophos. **Fellows.**"

As a further precaution, it is advisable that the Syrup should be ordered in the original bottles; the distinguishing marks which the bottles (and the wrappers surrounding them) bear, can then be examined, and the genuineness—or otherwise—of the contents thereby proved.

Medical Letters may be Addressed to:

Mr. FELLOWS, 48 Vesey Street, New York.

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